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August 1991

Bishop Resource Management Plan and Environmental Impact Statement

Volume I: Summary, Introduction, Alternatives, Affected Environment, Impacts, Appendices 1-6, and Glossary

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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FINAL

BISHOP
Resource Management Plan
and
Environmental Impact Statement

Volume I

August, 1991

Ed Hastey
State Director, California

United States Department of the Interior
Bureau of Land Management[1]
California State Office
Bakersfield District
Bishop Resource Area

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[1] The USDA Forest Service, Inyo National Forest, is a Cooperating Agency for the transmission line corridor portion of this plan and environmental impact statement.

Bishop Resource Management Plan and Environmental Impact Statement

Final

Responsible Agency: Bureau of Land Management, Bakersfield District.

Cooperating Agency: USDA Forest Service, Inyo National Forest, for the utility corridor portion of the plan and environmental impact statement.

Type of Action: Administrative

Abstract: The final Bishop Resource Management Plan provides a comprehensive framework for managing public lands administered by the Bishop Resource Area, Bakersfield District, California. The Environmental Impact Statement analyzes four alternative management scenarios (including the proposed action), ranging from an emphasis on consumptive uses to an emphasis on protection of natural values.

For further information contact:

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Federal Building, Room 302
800 Truxtun Avenue
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(805) 861-4206

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March 3, 1849

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
CALIFORNIA STATE OFFICE
2800 COTTAGE WAY, ROOM E-2845
SACRAMENTO, CALIFORNIA 95825-1889

IN REPLY REFER TO:

Dear Reader:

Enclosed for your review is the final Resource Management Plan (RMP) and Environmental Impact Statement (EIS) for the Bishop Resource Area. The draft Resource Management Plan and Environmental Impact Statement was published in September 1990, followed by a 90 day public comment period. Changes based on public comments and agency review have been incorporated into this document. The final RMP/EIS portrays the proposed action, with associated impacts, in its entirety. It is a refinement of the preferred alternative presented in the draft EIS.

The draft EIS is an integral part of the final. Much of the text and maps from the draft EIS are necessary as reference materials for this document.

Any part of this proposed plan may be protested only by parties who participated in the planning process. Protests must pertain to issues that were identified in the plan or through the public comment process. Protests must be sent to the Director (760), Bureau of Land Management, 1800 C Street, N.W. Washington, D.C. 20240. Protests must be postmarked within 30 days after the Environmental Protection Agency publishes the filing notice for this final EIS in the Federal Register. Protests must minimally contain the following information:

1. The name, mailing address, telephone number, and interest of the person filing the protest.

2. A statement of the issue or issues being protested.

3. A statement of the part or parts being protested. Cite pages, paragraphs, maps, etc. of the proposed RMP where practical.

4. A copy of all documents addressing the issue(s) that you submitted during the planning process, or a reference to the date when you discussed the issue(s) for the record.

5. A concise statement why you believe the BLM State Director's decision is incorrect.

At the end of the 30-day protest period, the proposed plan, excluding any portion under protest, will become final. Approval will be withheld on any portion of the plan under protest until final action has been completed on such protest.

Sincerely,

Ed Hastey

Ed Hastey
State Director

March 3 1849

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
BISHOP RESOURCE AREA
787 NORTH MAIN, SUITE P
BISHOP, CALIFORNIA 93514-2498

IN REPLY REFER TO:

Dear Reader:

People who visit or live in the eastern Sierra recognize it as a very special area. Captivated by its beauty, many people would agree that it is essential to keep the area "special". The Bishop Resource Management Plan (RMP) directs and guides the BLM to play a role in keeping the eastern Sierra a great place to live or visit.

This RMP is important because it will direct all activities on 750,000 acres of public land through the 1990's, a period during which you can expect better quality resource management than ever before. As the term "public land" indicates, these lands belong to you - the public. As such, you have a direct voice in how the lands are managed. Obviously, we cannot satisfy everyone all of the time, but your help becomes essential as we attempt to meet resource condition standards and balance the multitude of sometimes conflicting demands between resource use and protection.

We sincerely appreciate your input throughout the planning process, and assure you that we will maintain an open view to your future concerns and needs. Your input and comments have been extremely valuable, and have influenced many of the decisions in the plan. In the future, the best way to ensure local benefits from management direction and decisions is to work together at the local level.

With your help, we have developed a plan with an appropriate balance of multiple uses. The RMP paints a picture of improved resource conditions we will work toward over the next 10-15 years. It also provides a framework in which to evaluate future proposals. The plan embraces opportunities to meet the needs of users, including the local public, and promotes the wise use and conservation of our precious natural resources.

As we implement the plan, we look forward to continuing to work together. We have a good start, but we have additional hurdles to overcome. We will continue to need your involvement. Partnerships between BLM, the public and other agencies are the best way for us to accomplish our goals.

Thank you for your interest and help in developing the RMP.

Sincerely,

Mike Ferguson

Mike Ferguson
Area Manager

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Summary

Lizard at Antelope Mountain Area.

Summary

The final Bishop Resource Management Plan and Environmental Impact Statement (RMP/EIS) provides a comprehensive framework for managing public lands administered by the Bishop Resource Area, Bureau of Land Management (BLM). The RMP replaces the Benton-Owens Valley (1982) and Bodie-Coleville (1983) Management Framework Plans and will guide management for the next 10-20 years. Preparation of this RMP/EIS was guided by BLM planning regulations issued under authority of the Federal Land Policy and Management Act of 1976 (FLPMA), and Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act of 1969 (NEPA).

Located in the eastern Sierra region of California in Inyo and Mono Counties, the Bishop Resource Area encompasses 750,000 acres of public land and about 9,000 acres of federal mineral estate under private land. The area office also administers mineral leases on 2 million acres of the Inyo and Toiyabe National Forests. Less than 15 percent of the total land base in the resource area is in private ownership.

The resource area is divided into nine management areas: Coleville, Bridgeport Valley, Bodie Hills, Granite Mountain, Long Valley, Benton, Owens Valley, South Inyo, and Owens Lake. These geographically delineated sub-units of the Bishop Resource Area allowed the planning team to focus on resource values and issues specific to each area. Significant resources and program emphases include recreation, wildlife, locatable and salable minerals, realty, livestock grazing, and cultural resources.

The Bishop RMP focuses on resolving four major issues identified early in the planning process through public involvement and coordination with other federal, state, and local agencies. These issues are: ***Recreation*** (how to provide for a variety of recreation uses, meet increasing demand for recreation opportunities, and reduce potential conflicts with other uses or values); ***Wildlife*** (where and what management prescriptions are needed to enhance or maintain important wildlife habitats and populations); ***Minerals*** (how to meet the demand for mineral uses and reduce potential conflicts with other uses or values); and ***Land Ownership and Authorizations*** (where BLM should acquire or dispose of land, how and where public lands should be available for special or private uses, and how land use authorizations can be managed to reduce potential conflicts with other uses or values).

In addition to planning issues, BLM planning regulations required RMP decisions regarding Areas of Critical Environmental Concern, Special Recreation Management Areas, Scenic Byways, and streams eligible for study as potential additions to the National Wild and Scenic River System. This RMP also includes decisions that address livestock grazing, cultural resources, fuelwood harvesting, fire suppression, and an east-west transmission line corridor.

Four alternative management scenarios were analyzed in a draft RMP/EIS released for public review in September 1990. These alternatives were: 1) *No Action* (continuation of management under existing planning guidance); 2) ***Custodial Management*** (management guided primarily by laws, regulations, and policies); 3) ***Natural Resource Enhancement*** (management with an emphasis on improving natural values); and 4) *the **Preferred Alternative*** (proposed management that included prescriptions selected from the other alternatives). Over 600 public comments were received on the draft.

This final RMP/EIS focuses on proposed management. It was developed after analyzing public comments on the draft RMP/EIS and includes changes to improve clarity, changes to correct weaknesses in the draft, and changes to the preferred alternative and the environmental analyses. Most changes were made in response to public comments.

The plan identifies area-wide and management area specific direction and consists of four components: ***Management Themes*** (management philosophy for each management area); ***Decisions*** (land use allocations and resource condition objectives); ***Support Needs*** (actions necessary to implement the plan); and ***Rationales*** (explanations for selection of the proposed action). Proposed management emphasizes the protection and enhancement of environmental and recreational values while allowing for resource use and development. This emphasis is largely a response to public demand for more environmentally sensitive management of Bureau lands in the Bishop Resource Area. The impact analyses are presented on an area-wide basis since management direction is similar throughout the resource area. Decisions for all alternatives considered are summarized in Table S-1. Table S-2 presents a cumulative summary of the impacts of the alternatives.

Table S-1. Area-Wide Summary of Decisions.

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Wildlife	Yearlong Protection: Some mule deer winter range; sage grouse leks; some plant communities.		Yearlong Protection: Some mule deer winter range and migration corridors; tule elk calving areas; sage grouse areas (within 1/3 mile of leks); endangered, threatened, candidate, and sensitive plant and animal habitats; several plant communities.	Yearlong Protection: Some mule deer winter range and migration corridors; tule elk calving areas; sage grouse areas (within 1/3 mile of leks); endangered, threatened, candidate, and sensitive plant and animal habitats; several plant communities.
	Seasonal Protection: Tule elk calving areas; sage grouse nesting areas (within 2 miles of leks).		Seasonal Protection: Other mule deer winter range; sage grouse nesting areas (within 2 miles of leks); sage grouse wintering areas.	Seasonal Protection: Other mule deer winter range; sage grouse nesting areas (within 2 miles of leks); sage grouse wintering areas.
			Desired Plant Community Acres: 114,758. Improve habitat for several species.	Desired Plant Community Acres: 105,158. No net loss of wetlands or riparian habitats. Improve habitat for several species.

Table S-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Range	Open 3 allotments and expand 1 allotment when certain conditions are met. Prohibit livestock grazing on one unused allotment and in the South Inyo Management Area.	Open 3 allotments and expand 1 allotment when certain conditions are met. Prohibit livestock grazing in the South Inyo Management Area.	Prohibit livestock grazing on 10 allotments and in the South Inyo Management Area and Conway Summit ACEC. Change cattle to sheep use on 4 allotments.	Prohibit livestock grazing on 6 allotments and in the South Inyo Management Area and Conway Summit acquired land. Allow grazing on the Larkin Lake Allotment to maintain wetland habitat.
	Remove livestock grazing from 2 allotments when alternative areas are found.			Remove livestock grazing from 2 allotments when alternative areas are found. Remove livestock grazing from 2 allotments if current permittees transfer or relinquish their privileges.
	Average 60% utilization adjusted when conflicts with certain wildlife use.	Average 60% utilization adjusted when conflicts with certain wildlife use.	Average 60% utilization adjusted when conflicts with certain wildlife use.	Utilization will not exceed 60% on key species on all allotments. Livestock management changed when 60% level exceeded.
Recreation	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.
	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.

Table S-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Recreation (continued)	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon.	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon.	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon. Snowmobile restrictions in sage grouse wintering areas.	OHVs: Limited to designated roads and trails (closure provisions for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon. Snowmobile restrictions in sage grouse wintering areas.
	VRM I 4%, II 22%, III 69%, IV 5%	VRM I 4%, II 3%, III 72%, IV 21%	VRM I 6%, II 40%, III 52%, IV 2%	VRM I 6%, II 42%, III 50%, IV 2%
			Scenic Byways: 10 proposed.	Scenic Byways: 8 proposed.
			Provide for environmental education.	Establish an environmental education center.
Minerals	Salable: May be restricted in yearlong and seasonal protection areas.	Salable: Available for production with few restrictions.	Salable: May be restricted in yearlong and seasonal protection areas. Coleville consolidated to 1 pit. South Tableland closed.	Salable: May be restricted in yearlong and seasonal protection areas. Coleville consolidated to 1 pit. South Tableland closed.
	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 60,900 acres (8%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 30,900 acres (4%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 91,000 acres (12%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 31,300 acres (4%) proposed for withdrawal.

Table S-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Minerals (continued)	Geothermal: May be restricted in yearlong and seasonal protection areas.	Geothermal: Available for exploration and development; no surface occupancy in Bodie Bowl SRMA.	Geothermal: May be restricted in yearlong and seasonal protection areas; no leasing within 1 mile of selected hot springs.	Geothermal: May be restricted in yearlong and seasonal protection areas. Exploration and development permitted if no effect on thermal aquifer or surface water source.
Lands	Acquire 4,700 acres for wildlife habitat.		Acquire 41,700 acres for wildlife habitat, recreational, scenic or cultural resources.	Acquire 18,700 acres for wildlife habitat, recreational, scenic or cultural resources.
	Dispose of 23,100 acres for agriculture, residential expansion, or community service.	Dispose of 24,200 acres for agriculture, residential expansion, community service, or that are difficult to manage.		Dispose of 9,000 acres for agriculture, residential expansion, or community service.
	Retain all watershed withdrawals.	Propose all watershed withdrawals for revocation.	Propose all watershed withdrawals for revocation.	Develop appropriate designation to replace watershed withdrawals.
ACECs	Travertine Hot Springs, Fish Slough.	Travertine Hot Springs, Fish Slough.	Travertine Hot Springs, Fish Slough, Slinkard Valley, Conway Summit, Bodie Mountain, Copper Mountain, Long Valley, Alabama Hills, Crater Mountain, Keynot Peak.	Travertine Hot Springs, Fish Slough, Slinkard Valley (reduced acreage), Conway Summit, Bodie Bowl, Crater Mountain, Keynot Peak.
Utility Corridors	Designate as corridors all lines 115kV and above.	Designate as corridors all lines 115kV and above.	None	Designate as corridors the 500kV DC Intertie; the 115kV SCE line from Bishop south.

Table S-2. Cumulative Summary of the Impacts of the Alternatives.

	Alternative 1	Alternative 2
Visual Resources	Bureau decisions would generally cause visual resources to remain about the same on Bureau lands. Localized benefits would be outweighed by slight to moderate adverse impacts at site-specific areas. Some positive impacts would result from specific actions to improve visual resources. Cumulatively, multiple agency management of regional visual resources to maintain the area's scenery would be compatible and attainable.	Bureau decisions would generally cause visual resources to be adversely affected on Bureau lands. The major factor contributing to the decline would be designation of several management areas to less restrictive VRM classes. This would permit greater visual degradation on 156,000 acres designated as VRM class IV. Cumulatively, multiple agency management of regional visual resources to maintain the area's scenery would be least compatible and not attainable.
Recreation Opportunities	Bureau decisions would cause recreation opportunities to remain about the same with some local declines offsetting various benefits. Cumulatively, multiple agency management of regional recreation opportunities would be compatible with one another and increase primarily on National Forest lands where a proactive approach will be implemented.	Bureau decisions would cause recreation opportunities to remain about the same although moderate adverse impacts to various opportunities would occur in the resource area. Mitigation of resource conflicts would occur on a reactive basis with little proactive management emphasis. Cumulatively, recreation opportunities would increase primarily on National Forest lands where a proactive management approach will be implemented.
Sage Grouse and Quail	Bureau actions would be expected to contribute to a slow and persistent decline of sage grouse and quail habitat quality. Cumulatively, regional actions would be expected to contribute additionally to loss of habitat or habitat quality in sage grouse and quail areas.	Bureau actions would be expected to contribute significantly to the decline of sage grouse and quail habitat quality. Cumulatively, the continuing trend in regional land use would be expected to contribute to degrading and eliminating sage grouse and quail habitat.
Mule Deer	Actions on Bureau land would be expected to cause a slight to moderate decline in habitat quality and availability for six deer herds. Cumulatively, region-wide habitat conditions on migration corridors, holding areas and winter ranges would be expected to measurably decline.	Actions on Bureau land would be expected to cause a moderate to high decrease in habitat quality and availability for six deer herds. Cumulatively, region-wide habitat conditions on migration corridors, holding areas and winter ranges would be expected to undergo a severe decline.

Alternative 3	Alternative 4
Bureau decisions would generally cause visual resources to undergo moderate to high improvements on Bureau lands. Major factors contributing to the improvement are more restrictive VRM classes in portions of the resource area and wildlife habitat improvements. Cumulatively, a common region-wide management emphasis on visual resources by land use agencies to maintain or improve area scenery would be beneficial.	Bureau decisions will lead to a slight to moderate improvement of scenic values on Bureau land. An increase in VRM classes throughout scenic portions of the resource area contributes to the improvement. Cumulatively, a common region-wide management emphasis on visual resources by land use agencies to maintain or improve area scenery will be beneficial.
Bureau decisions would moderately to highly improve recreation opportunities and values throughout the resource area. The provision of visitor services, promotion of dispersed semi-primitive recreation uses, and improved management of scenic resources would increase visitation and user satisfaction more than alternatives 1 and 2. Cumulatively, region-wide recreation opportunities would increase from the multiple agency proactive management emphasis of visitor services, dispersed recreational uses, and recreation facilities development.	Bureau decisions will slightly to moderately improve recreation opportunities and values throughout much of the resource area. The Bureau's proactive management emphasis to improve and develop recreation opportunities will enhance visitors' recreation experience more than alternatives 1 and 2. Cumulatively, region-wide recreation opportunities will increase through provision of visitor services, promotion of dispersed recreation and recreation facilities development.
Bureau actions would be expected to cause measurable improvement in sage grouse and quail habitat quality. Cumulatively, region-wide actions would be expected to diminish overall sage grouse and quail habitat conditions, despite the positive measures on Bureau land.	Bureau actions will cause a slight improvement in sage grouse habitat quality while maintaining or causing a slight loss in quail habitat availability. Region-wide actions will slightly diminish sage grouse habitat conditions and compound quail habitat loss on Bureau lands.
Actions on Bureau land would be expected to substantially improve habitat conditions for five deer herds. Cumulatively, the region-wide habitat conditions for deer migratory corridors, holding areas, and winter ranges would be expected to undergo a slight to moderate decline.	Actions on Bureau land will improve habitat conditions for four deer herds. Cumulatively, the region-wide habitat conditions for deer migratory corridors, holding areas, and winter ranges will undergo a moderate decline.

Table S-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Tule Elk	Bureau actions would be expected to cause a slight decline or maintain general habitat condition for elk while ensuring seasonal protection of all administered calving areas. Cumulatively, region-wide actions would be expected to cause a decline in forage quality and quantity, affecting general habitat conditions.	Bureau actions would be expected to cause a moderate decline in elk habitat condition. Significant adverse impacts to elk calving habitat would be expected from Bureau approved projects. Cumulatively, region-wide actions would be expected to cause a moderate negative impact on overall elk habitat condition.
Pronghorn	Bureau actions would be expected to cause a slight decline in overall habitat condition for pronghorn. Some areas, like Hammil Valley, could experience greater levels of habitat fragmentation and other forms of human disturbance than other locations. Cumulatively, region-wide actions would be expected to cause a slight decline in habitat quality.	Bureau actions would be expected to cause a moderate decline in overall habitat condition for pronghorn. Areas like Benton Valley and Hammil Valley could incur greater levels of habitat fragmentation and other forms of human disturbance than other areas. Cumulatively, region-wide actions would be expected to cause a moderate decline in habitat quality.
Riparian and Fisheries Habitat	Bureau actions would be expected to cause no change in overall riparian and fish habitat condition. Region-wide actions would be expected to cause a slight decline in general fish and riparian habitat condition.	Bureau actions would be expected to contribute significantly to a downward trend of riparian and fish habitat condition. Region-wide actions would be expected to cause a moderate decline in general fish and riparian habitat condition.
Special Status Species	Bureau actions would be expected to have a insignificant effect on habitat improvement for the majority of special status species. Substantial improvement in habitat quality and availability would be expected for the Owens pupfish, Owens tui chub and Lahontan cutthroat trout from Bureau activities. Region-wide actions would be expected to cause moderate to high negative impacts on the majority of special status species habitats resulting in additional species listed under the Federal Endangered Species Act.	Bureau actions would be expected to have an insignificant effect on habitat improvement for all, except one, special status species. Slight improvement in habitat quality and availability would be expected for the Lahontan cutthroat trout. Region-wide actions would be expected to cause moderate to high negative impacts on the majority of special status species habitats resulting in additional species listed under the Federal Endangered Species Act.

Alternative 3	Alternative 4
Bureau actions would be expected to cause a slight to moderate positive impact on elk habitat condition. Calving area habitat quality would be maintained except for possible locatable mineral exploration and development activity. Cumulatively, region-wide actions would be expected to cause a slight negative impact to overall elk habitat condition.	Bureau actions will improve habitat conditions and ensure calving area habitat quality is maintained. Cumulatively, region-wide actions will cause a slight negative impact to forage resources and general habitat condition.
Bureau actions would be expected to cause a moderate increase in overall habitat condition for pronghorn. Improved water distribution, desired plant community management and other actions could significantly improve pronghorn habitat quality. Cumulatively, region-wide actions would be expected to cause slight to moderate improvement in overall pronghorn habitat condition.	Bureau actions will have a significant positive impact on approximately one-half of the region's pronghorn habitat. Cumulatively, region-wide actions will have a slight to moderate positive impact on overall pronghorn habitat condition.
Bureau actions would significantly improve riparian and fish habitat condition. Region-wide negative impacts would be offset by substantial Bureau riparian and fish habitat improvements resulting in an overall slight positive impact.	Bureau actions will significantly improve riparian and fish habitat condition. Region-wide negative impacts will be offset by substantial Bureau riparian and fish habitat improvements resulting in an overall slight positive impact.
Bureau actions would be expected to have a substantial positive impact on habitat conditions for special status species. Removal from listing under the Federal Endangered Species Act would be expected to occur for the Owens pupfish, Owens tui chub and Lahontan cutthroat trout. Region-wide activities would be expected to continue causing slight to moderate impacts to habitat availability and quality despite Bureau progress with habitat recovery and protection.	Bureau actions will cause a slight improvement in special status species habitats. The Owens pupfish, Owens tui chub, and Lahontan cutthroat trout will be afforded the opportunity for down-listing or removal from formal listing under the Federal Endangered Species Act. Region-wide activities will continue causing slight to moderate negative impacts on the majority of special status plant and animal habitats in the eastern Sierra.

Table S-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Vegetation	Bureau actions would be expected to have a slight negative impact on the vegetative condition of three plant communities (meadow, riparian and aspen). No significant changes would be expected to occur in the other six vegetation communities of special concern. Region-wide actions would be expected to cause a slight to moderate decline in the quantity and quality of old growth and mature forest types with little or no change in the overall areal extent and quality of the other vegetation types.	Bureau actions would be expected to have a slight negative impact on the vegetative condition for three plant communities (meadow, riparian and aspen). A complete harvest of the limited amount of old growth and mature forest types would be expected. Region-wide actions would be expected to cause a moderate decline in quantity and quality of old growth and mature forest types with little or no change in the overall areal extent and quality of the other vegetation types.
Locatable Minerals	Bureau decisions would include the withdrawal of 8,589 acres of high and moderate mineral Potential. This would have a moderate impact on development of minerals. VRM II areas and seasonal restrictions would increase costs and constraints of exploration and development. Cumulatively, Bureau actions would be more restrictive to regional mineral development than activities permitted on adjacent lands.	Bureau decisions would include the withdrawal of 5,757 acres of high and moderate mineral potential. This would have slight impact on development of minerals. Yearlong and VRM II restrictions would have slight impact affecting only 5% of the high mineral potential acreage. Cumulatively, region-wide impacts would depend on management decisions of adjacent property. The USFS and LADWP would be more restrictive in development compared to restrictions on Bureau Lands.
Salable Minerals	Bureau decisions resulting in economic and environmental restrictions would impact 40% of salable mineral deposits. A moderate impact to salable mineral use results from 28% of the resource placed under VRM I and VRM II restrictions. Cumulatively, region-wide conditions would cause slight to moderate negative impacts to salable mineral use.	Bureau decisions resulting in economic and environmental restrictions would impact 12% of salable mineral deposits. The low number of acres assigned to VRM I and VRM II restrictions would result in slight impacts to salable mineral use. Cumulatively, region-wide conditions would cause slight to moderate negative impacts to salable mineral use.

Alternative 3	Alternative 4
Bureau actions would be expected to have a substantial positive effect on the quality and abundance of plant and animal life in at least three plant communities (meadow, riparian and aspen). Vegetation conditions would also be maintained or improved in the other six communities. Region-wide actions would cause slight to moderate improvement in the quality and abundance of vegetation in the biologically diverse meadow, riparian and aspen communities. Little or no change would be expected in the areal extent and quality of other vegetation types.	Bureau actions will measurably improve the quality and abundance of plant and animal life in at least three plant communities (meadow, riparian and aspen). Vegetation conditions will also be maintained or improved in the other six plant communities. Region-wide actions will slightly improve the quality and abundance of vegetation in the biologically diverse meadow, riparian, and aspen vegetation types. Little to no change will occur in the areal extent and quality of the other vegetation types.
Bureau decisions would include the withdrawal of 19,635 acres of high and moderate mineral potential. This would moderately impact mineral development. Marginal deposits would be uneconomical to develop due to high acreages of yearlong, seasonal, and VRM I and II restrictions that would increase costs. Cumulatively, region-wide impacts would be less restrictive on adjacent lands. Due to Bureau decisions, a high negative impact to regional mineral development would occur.	Bureau decisions include the withdrawal of 7,403 acres of high and moderate mineral potential. This will slightly impact mineral development. Moderate impacts are created by VRM I and yearlong restrictions which will increase costs and constraints of exploration and development. Some mineral deposits will be uneconomical to develop. Cumulatively, region-wide impacts depend on management objectives of adjacent properties and the level of planned development. Due to Bureau decisions a moderate to severe negative impact to regional mineral development will occur.
Bureau decisions resulting in economic and environmental restrictions would impact 56% of salable mineral deposits. The high number of acres assigned to VRM I and VRM II restrictions would result in severe impacts to salable mineral use. More than one-half of the deposits would become uneconomic to mine. Cumulatively, region-wide conditions would cause high negative impacts to salable mineral use.	Bureau decisions resulting in environmental and economic restrictions will impact 54% of the deposits making them uneconomic to develop. Pumice and dimension stone deposits will be severely impacted in the Benton and Long Valley areas. Cumulatively, region-wide conditions will cause moderate negative impacts to salable mineral use.

Table S-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Livestock Grazing	Actions on Bureau land would continue to improve rangeland conditions for livestock and other resources to a moderate degree. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to operators would be expected to cause little or no change in the regional livestock industry.	Actions on Bureau land would not result in improved rangeland conditions for livestock and other resources. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to the regional livestock industry would be the same as identified under alternative 1. Overall this would be the least impacting (negatively or positively) alternative on livestock operations.
Cultural Resources	Bureau decisions for cultural resource management would be weak in the areas of educational and interpretive efforts. Some protection is given to the Bodie area. Traditional lifeway values are considered in the Bureau decision making process. Communication would continue to improve with local Indian communities. Region-wide there would be continued loss of cultural properties from vandalism and projects which could not be redesigned. Data retrieval would mitigate some of the losses.	Bureau decisions for cultural resource management would result in a program much less effective than it is now, especially in interpretive and data retrieval efforts. Existing protection would continue in the Bodie area. Traditional lifeway values would continue to be considered in the Bureau decision making process. Region-wide, there would be continued loss of cultural properties from vandalism and projects which would not be redesigned. There would be little or no data retrieval at threatened sites on Bureau lands, resulting in loss of a greater amount of information than under the other alternatives.

Alternative 3	Alternative 4
Actions on Bureau land would result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater longterm benefits to operators than any other alternative. The greatest amount of rangeland improvement would be realized under this alternative. However, this alternative would create moderate to high negative short-term impacts due to increased costs of conducting operations. Potential impacts on a regional basis would be moderate.	Actions on Bureau land will result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater longterm benefits to operators than alternatives 1 or 2. Benefits will be slightly less than under alternative 3. A great amount of rangeland improvement will be realized. However, this alternative will create moderate to high negative short-term impacts due to increased costs of operations. Impacts on a regional basis will be slight to moderate.
Bureau decisions for cultural resource management would result in a program improved over the existing situation through educational and interpretive efforts. Protection of the Bodie area would improve through mineral withdrawal, ACEC designation and development of limits of acceptable change. Traditional lifeway values would continue to be considered in the Bureau decision making process. Region-wide, there would be continued slow loss of cultural properties from vandalism and projects which could not be redesigned. However, the loss from vandalism would be expected to decrease as people became better informed. Data retrieval at threatened sites would mitigate many of the potential losses.	Bureau decisions for cultural resource management will result in a program improved over the existing situation through educational and interpretive efforts. Protection of the Bodie area will improve through mineral withdrawal, ACEC designation and development of limits of acceptable change. Attention to concerns of the local Indian community and benefits to their traditional lifeways will improve slightly. Region-wide, there will be continued slow loss of cultural properties form vandalism and projects which cannot be redesigned. However, the loss from vandalism will decrease as people become better informed. Data retrieval at threatened sites will mitigate many of the potential losses.

Table S-2. Cumulative Impact Summary of the Alternatives (continued).

Transmission Line Corridor Alternatives Impact Comparison

No Action	Pizona	Queen Valley
Additional demand for electricity in southern California would have to be met using existing transmission line corridors or corridors outside of the Owens Valley. System reliability would be less than under the other alternatives and could result in major power outages in the event of a large natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains would remain intact. There would be no cumulative impacts.	A small but unknown number of deer and pronghorn would be lost. Visual quality objectives would not be met at the Highway 6 crossing near Montgomery Pass. There would be significant negative impacts to the area's natural and undisturbed character and the associated experiences of recreationists. Approximately 25 residents plus the users of a hotel/casino would have increased prolonged exposure to electro-magnetic fields (EMF). It is not known if this exposure together with the cumulative effect of multiple exposures from home and job appliances would constitute a health risk for these people.	A small but unknown number of deer would be lost. Visual resources would be seriously degraded; VQO and VRM standards would not be met. There would be an insignificant increase in prolonged human exposure to electro-magnetic fields (EMF). The cumulative effect from multiple exposures would be the same as described for the Pizona area.

Soldier Canyon

A small but unknown number of elk calves would be lost. Up to four raptorial birds, including bald eagle and golden eagle, could be killed every 10 years. Visual impacts in the corridor area would be minimal, except where the corridor crosses the Waucoba Road. There would be significant negative impacts to the recreational values attached to the natural undisturbed character of the area. There would be no significant increase in prolonged human exposure to electro-magnetic fields (EMF). The cumulative effect from multiple exposures would be the same as described for the Pizona area.

Proposed Action

The potential for a corridor designation in the Soldier Canyon area remains; but, additional demand for electrical power in southern California will have to be met using existing transmission line corridors or corridors outside the Owens Valley until an in-depth study of any potential corridor could be completed. System reliability will potentially be less and could result in major power outages in the event of a large natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains will remain intact for now.

Chapter 1

Introduction

Petroglyphs on the Volcanic Tableland.

Chapter 1
Introduction

Location and Overview

The Bishop Resource Area of the Bakersfield District is located in the eastern Sierra region of California in Mono and Inyo Counties (Figure 1-1). The area extends from the southern end of Owens Lake to Topaz Lake (Figure 1-2). The resource area includes approximately 750,000 acres of public land and 9,000 acres of federal mineral estate under private land. About 524,000 acres of the Bishop Resource Area are in Mono County and 226,000 acres are in Inyo County. The area office also administers mineral leases on 2 million acres in the California portions of the Inyo and Toiyabe National Forests. Land management planning for these lands is done by the respective forests.

The resource area shares boundaries with Inyo National Forest, Toiyabe National Forest, the City of Los Angeles (Department of Water and Power lands) and Bodie State Historic Park. Surface ownership in the resource area is depicted on Map 1 (Land Status) included with this volume.

Management Areas

The resource area is divided into nine management areas (Figure 1-2). Three transmission line corridor study areas are also analyzed (Figure 1-3). These geographically delineated sub-units of the Bishop Resource Area allowed the planning team to focus on resource values and issues specific to each area. Brief descriptions of each management area and the utility corridor study areas are presented below.

Coleville Management Area

This area comprises 21,560 acres of Bureau land in the northernmost portion of the resource area. Important resources include old growth fir in Slinkard Valley, mule deer winter range in Slinkard and Antelope Valleys, and eleven perennial streams. Three of the streams provide recreational trout fishing and Mill Creek provides habitat for Lahontan cutthroat trout. Scenic values in the area are high. Part of the West Walker River has been designated by the State of California as a Wild and Scenic River.

Bridgeport Valley Management Area

This area contains 13,050 acres of Bureau land west of Bridgeport and north of Conway Summit. It has important scenic, wildlife and riparian values, and supports mineral, recreation and livestock uses. The Travertine Hot Springs Area of Critical Environmental Concern (ACEC) has important cultural and recreational values, as well as high geothermal potential.

Bodie Hills Management Area

This area encompasses 121,150 acres of Bureau land east of Bridgeport. It includes the Bodie National Historic Landmark and has significant mineral, wildlife, riparian, livestock grazing, cultural, and recreational values. Cooperation and coordination with Bodie State Historic Park is an important concern in this management area.

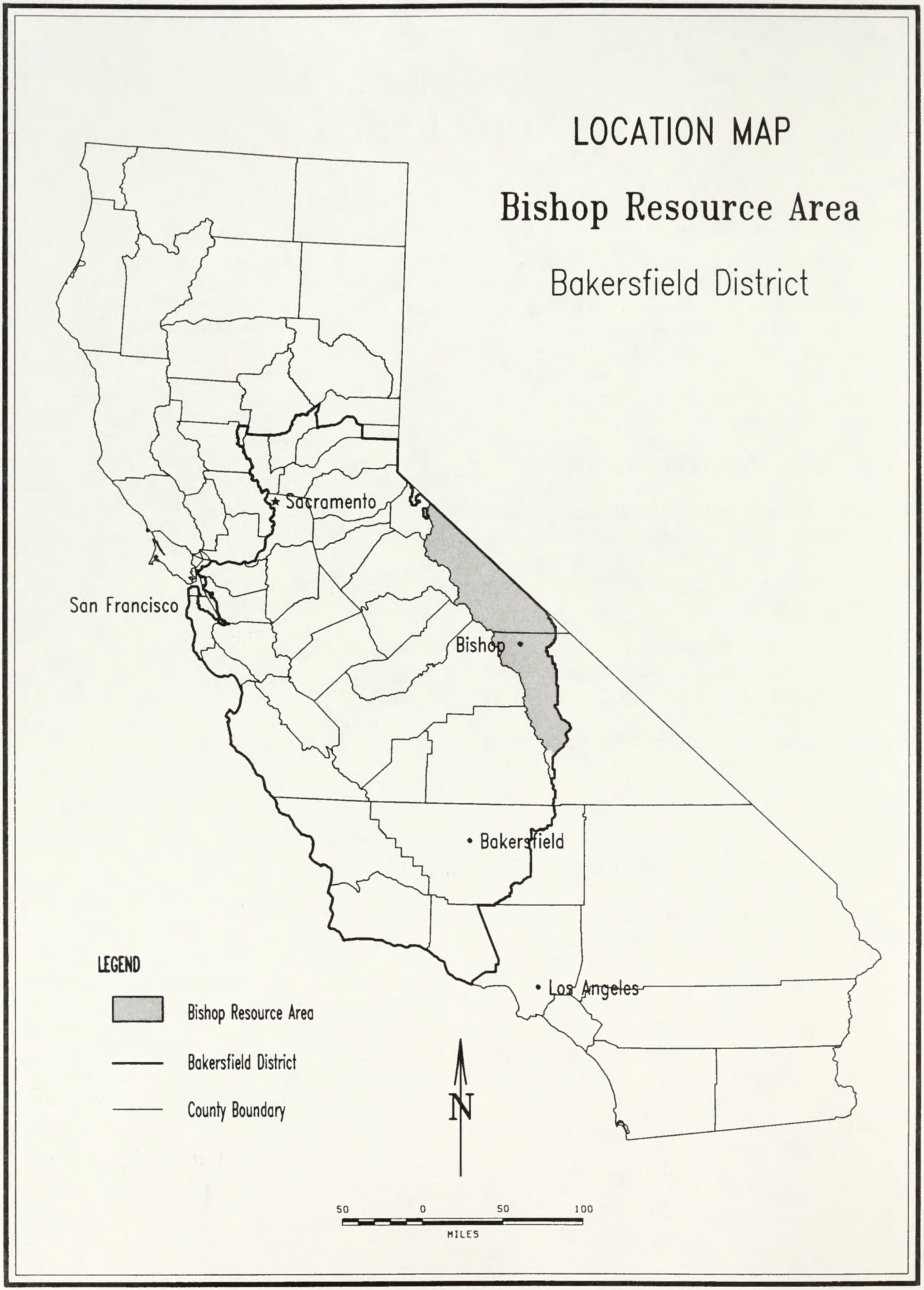

LOCATION MAP
Bishop Resource Area
Bakersfield District
Sacramento
San Francisco
Bishop
Bakersfield
Los Angeles
LEGEND
Bishop Resource Area
Bakersfield District
County Boundary
N
50
0
50
100
MILES

Figure 1–1

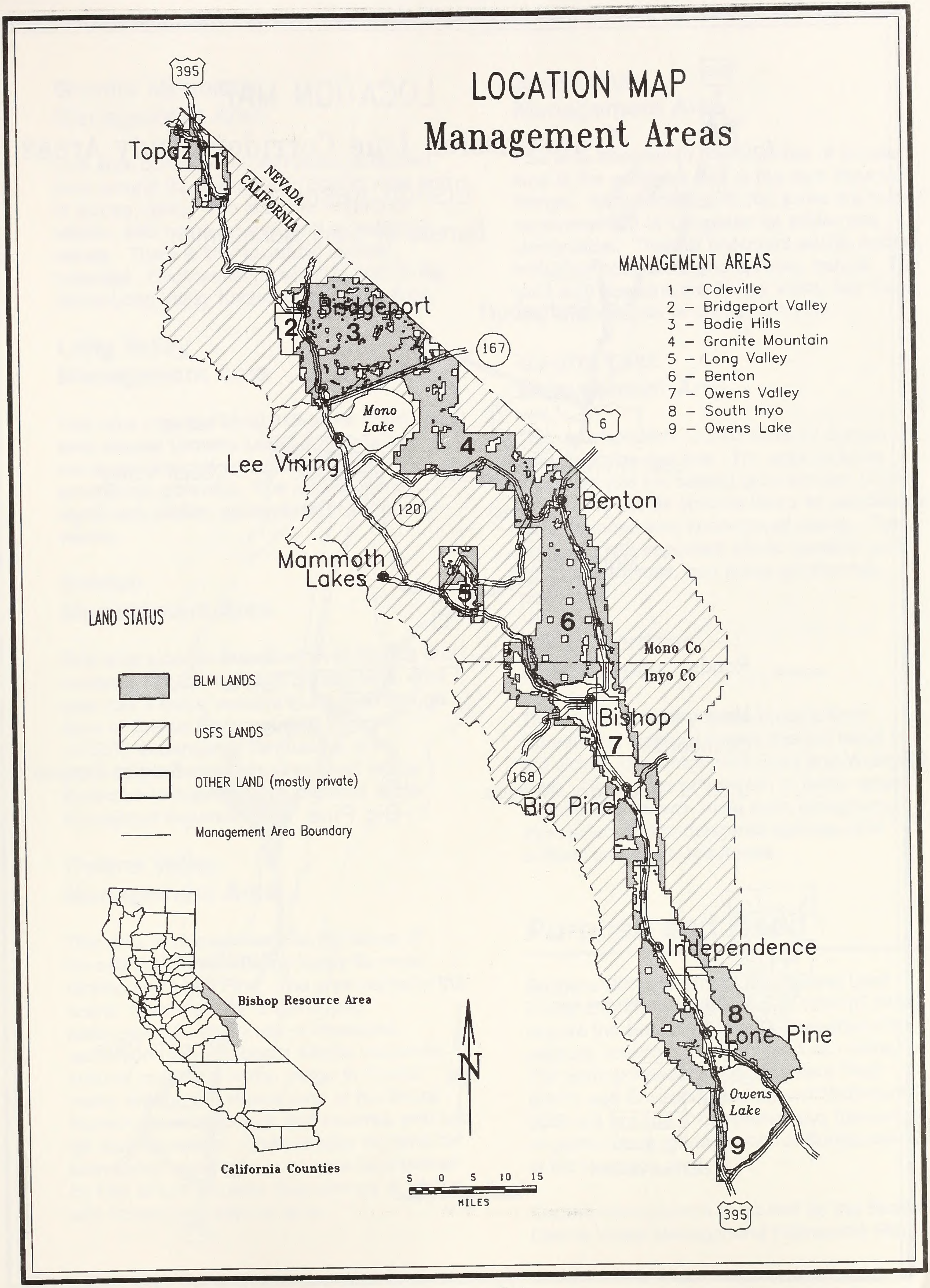
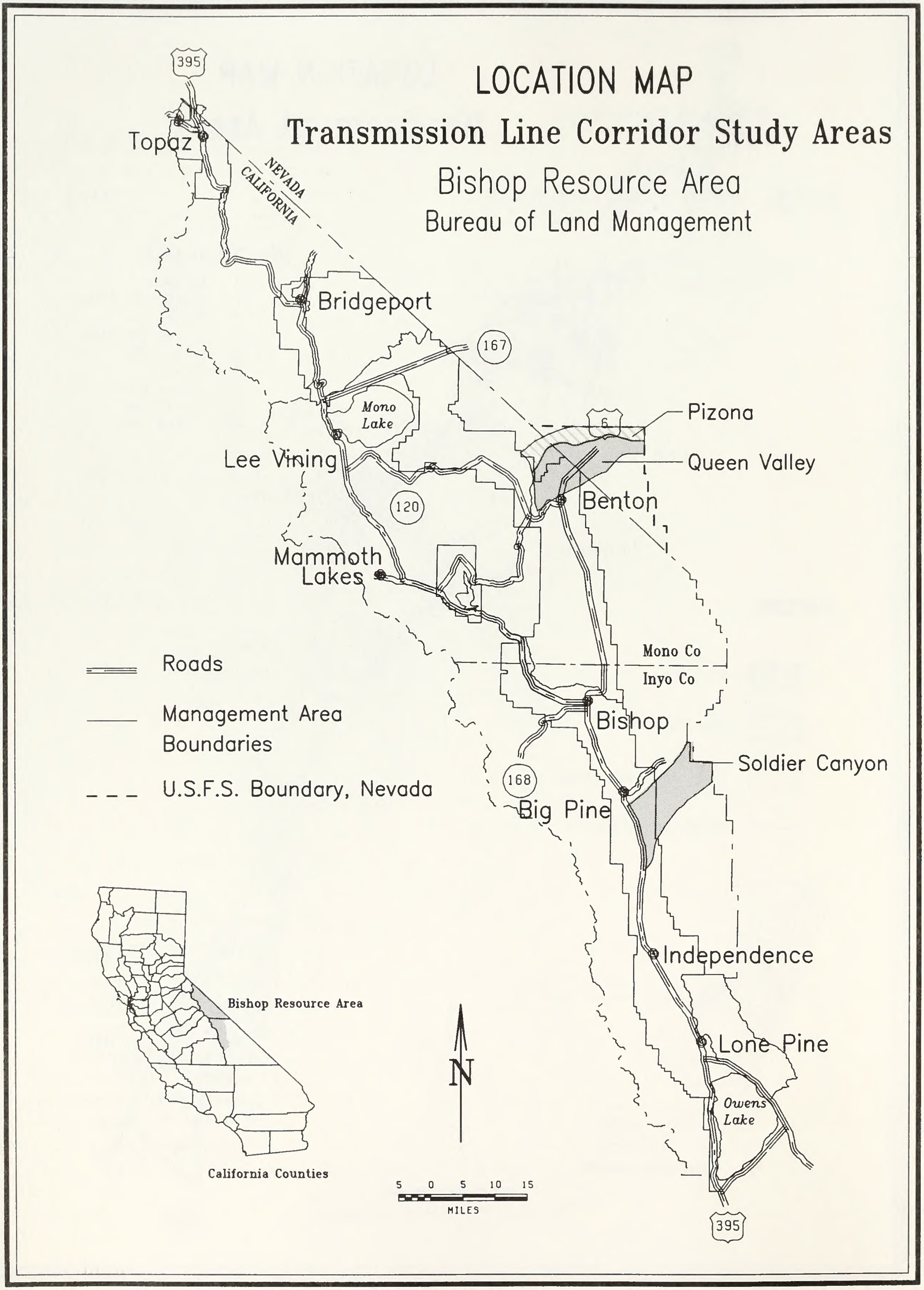

LOCATION MAP
Management Areas
MANAGEMENT AREAS
1 – Coleville
2 – Bridgeport Valley
3 – Bodie Hills
4 – Granite Mountain
5 – Long Valley
6 – Benton
7 – Owens Valley
8 – South Inyo
9 – Owens Lake
LAND STATUS
BLM LANDS
USFS LANDS
OTHER LAND (mostly private)
Management Area Boundary
395
Topaz
NEVADA
CALIFORNIA
Bridgeport
167
Mono Lake
Lee Vining
6
Benton
120
Mammoth Lakes
Mono Co
Inyo Co
Bishop
168
Big Pine
Independence
Lone Pine
Owens Lake
Bishop Resource Area
California Counties
N
5 0 5 10 15
MILES

Figure 1–2



LOCATION MAP

Transmission Line Corridor Study Areas

Bishop Resource Area

Bureau of Land Management

Figure 1–3

Granite Mountain Management Area

This area contains 160,490 acres of Bureau land around the Mono Basin Scenic Area and in Adobe Valley. The area has important wildlife, wild horse, scenic, and recreational values. There is little locatable mineral potential. Geothermal potential is high in the Mono-Long Valley Known Geothermal Area.

Long Valley Management Area

This area consists of 18,210 acres of Bureau land around Crowley Lake. The area has numerous thermal springs and high geothermal potential. The area also has significant wildlife, wetland, and recreational values.

Benton Management Area

This area extends from Benton to Bishop and contains 178,220 acres of Bureau land. The area has a major wetland in the Fish Slough Area of Critical Environmental Concern (ACEC), endangered fish habitat, and important cultural and recreational values. Extensive mineral material deposits occur throughout the area.

Owens Valley Management Area

This area encompasses 153,750 acres of Bureau land in the Owens Valley between Bishop and Lone Pine. The area contains the scenic Alabama Hills, 3 developed campgrounds, and areas of dispersed recreation use. Important wildlife resources include mule deer winter range in Round Valley and on the alluvial fans of the Sierra Nevada, several springs and streams, and tule elk calving habitat. There is also demand for community expansion in an area land-locked by City of Los Angeles (Department of Water and Power) and federal lands.

South Inyo Management Area

This area consists of 65,000 acres of Bureau land in the southern end of the Inyo Mountain Range. Approximately 28,000 acres are being recommended to Congress for wilderness designation. There is important wildlife habitat, including potential bighorn sheep habitat. The area also contains the Saline Valley Salt Tram and small stands of bristlecone pine.

Owens Lake Management Area

This area contains 15,790 acres of Bureau land near Owens Lake. The area includes important tule elk calving grounds and habitat for several wildlife species listed as candidates for threatened and endangered status. The area also has important scenic qualities and cultural resources, and some geothermal potential.

Utility Corridor Study Areas

The 3 corridor study areas include both Bureau and National Forest System lands in the vicinity of Montgomery Pass and Westgard Pass. Resources of concern in these areas include wild horses, mule deer, pronghorn, threatened and endangered species, and cultural and visual resources.

Purpose and Need

Sections 201 and 202 of the Federal Land Policy and Management Act of 1976 (FLPMA) require the Bureau of Land Management to prepare, maintain, and use land use plans. The Bishop Resource Management Plan (RMP) and Environmental Impact Statement (EIS) will provide a comprehensive framework to guide future management of Bureau lands in the resource area.

Current management is guided by the Benton-Owens Valley Management Framework Plan

(1982) and the Bodie-Coleville Management Framework Plan (1983). An RMP for the entire resource area is needed to consolidate existing plans and address recent issues. In addition, Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act of 1969 (NEPA) list land use plans as significant federal actions that require the preparation of environmental impact statements [see Title 40, Part 1500 in the Code of Federal Regulations]. With the exception of grazing decisions, existing land use plans were not analyzed in an EIS.

Planning Process

The resource management planning process consists of the 7 steps listed below:

Step 1: Identify issues

Step 2: Collect relevant information

Step 3: Evaluate the information

Step 4: Develop alternative plans

Step 5: Estimate effects

Step 6: Select a preferred alternative

Step 7: Monitor resource conditions and track implementation of the plan

Major Issues Addressed in the Plan

The plan addresses the following major issues. They were identified early in the planning process through public input, BLM expertise, and coordination with other federal, state, and local agencies.

Recreation

Recreational use is rapidly increasing in intensity and diversity throughout the resource area. The quality of recreation opportunities and scenic values is vital to the region's economy. In addition, some recreational uses either compete or conflict with other uses or values. Land use plans must be sensitive to these issues to gain public support.

Wildlife

The resource area provides habitat for a variety of wildlife species. Many of these species (for example, mule deer and rainbow trout) are perceived as vital economic factors affecting tourism. In addition, threatened and endangered species, streams, and riparian habitats are very important concerns in the resource area. Off-highway vehicle use, mineral development and rights-of-way development can damage wildlife habitat if not properly managed. Poor livestock grazing practices may also impact wildlife habitat. The public expects our management to include prescriptions to enhance wildlife habitat.

Minerals

Industry demand is high for salable (sand, gravel, building stone, etc.) and locatable (gold, silver, platinum, etc.) minerals. Numerous conflicts with other resources, such as wildlife habitat and visual resources, can arise from the intense nature of this land use. Decisions need to be made that address these potential conflicts.

Land Ownership and Authorizations

Less than 15% of the land in Inyo and Mono Counties is held in private ownership. This creates an unusually high demand for special uses of Bureau lands. Public land can be made available for private, local government or nonprofit uses in a variety of ways: rights-of-way, special use leases and permits, sale or exchange, and Recreation and Public Purpose Act leases or patents. Frequently these uses conflict with natural resource and other values.

Disposal of public land in most of the resource area is prohibited by watershed withdrawals that were enacted by Congress and the President in the 1930s. Generally, these withdrawals were enacted to protect the watershed for the City of Los Angeles and other cities and towns. One of the main issues is whether or not these watershed withdrawals are still necessary.

There is considerable demand from utility companies for additional transmission line routes through the Owens Valley. The two most likely entry points for new transmission lines are in the Montgomery Pass and Westgard Pass vicinities. The designation of transmission line corridors is controversial because of potential visual and other environmental impacts.

Issues Considered but Dropped from Further Analysis

The following issues were identified during scoping but were not selected for detailed analysis in the RMP/EIS. The reasons for not analyzing these issues in depth are presented below.

Wilderness Recommendations

The Bureau's wilderness review program consists of an inventory, study, and report phase. Inventories in the Bishop Resource Area which led to Wilderness Study Area (WSA) designations were completed in 1979-1980. In 1979, the Bureau published the Interim Management Policy and Guidelines for Lands Under Wilderness Review (IMP) to identify management to protect WSA wilderness values during the wilderness review process.

In the study phase, Wilderness Study Areas larger than 5,000 acres were evaluated for wilderness designation in the Benton-Owens Valley/Bodie-Coleville Final Wilderness EIS (1987). This study was completed in accordance with the Bureau's Wilderness Study Policy: Policies, Criteria and Guidelines for Conducting Wilderness Studies on Public Lands (47 CFR 5098-5122) dated Feb. 3, 1982. Public input was received throughout the study phase.

In the report phase, corresponding wilderness study reports were prepared during the late 1980s for the President and Congress. In accordance with law and Bureau policy, the Bureau has forwarded its wilderness recommendations and reports through administrative channels to be introduced to Congress. In this phase, the Bureau has recommended 28,200 acres of the Southern Inyo Mountains WSA (CA-010-056) for wilderness designation. Any further public input regarding the Bureau's recommendations would be made through congressional hearings.

Several Wilderness Study Areas are less than 5,000 acres and adjoin Inyo National Forest lands. Wilderness determinations for these areas will be contingent on proposed management of adjacent National Forest lands pending appeal of the Forest Plan.

Since Congress may modify any Bureau recommendation, the Bureau will protect wilderness values in all Wilderness Study Areas from impairment until Congress and the President make their final wilderness decisions. Wilderness values will be protected or enhanced according to Interim Management Policy.

For purposes of planning and analysis, this RMP assumes that Congress will designate the recommended portion of the Southern Inyo Mountains WSA as wilderness. If Congress designates additional lands in the resource area as wilderness, then an RMP amendment will be prepared to direct long term management of those lands. Any area designated as wilderness will be managed according to the Wilderness Act.

However, since the Bureau expects Congress to make wilderness designations before the next RMP is prepared, this RMP will prescribe long term direction for nonwilderness uses in Wilderness Study Areas not recommended for wilderness designation. Until the Congress and the President either designate these areas as wilderness or make them available to nonwilderness uses, RMP decisions will be implemented only if they are consistent with the Interim Management Policy.

Copies of the Interim Management Policy and Wilderness Study Area maps are available at the Bishop office for public review. They have not been included in this document because the wilderness review process falls outside the scope of the RMP.

Livestock Grazing Decisions

In the initial planning stages of the RMP, the Bishop Resource Area, Bakersfield District and California State offices considered whether livestock grazing should be analyzed in detail. It was determined that grazing decisions analyzed in the Benton-Owens Valley (1981) and Bodie-Coleville (1982) grazing EISs were still valid and meet the requirements of the National Environmental Policy Act of 1969 (NEPA). This determination was based on review of federal grazing regulations, BLM rangeland monitoring policy, and rangeland inventory and monitoring data collected in the resource area.

Current federal grazing regulations and BLM rangeland monitoring policy provide for adjustments in livestock grazing use when monitoring shows a change is warranted. In the Benton-Owens Valley EIS area, inventory data collected in the early 1980s indicated that adjustments in grazing preference or season of use were needed. These adjustments were made in the mid-1980s and have been validated by monitoring. In the Bodie-Coleville EIS area, inventory and monitoring data collected throughout the 1980s indicate that on most allotments changes in grazing management and development of range improvement projects are the appropriate actions. These changes and projects are being developed in Allotment Management Plans.

As a result, most of the existing livestock grazing decisions are incorporated into this RMP by reference. While there are some decisions in the RMP regarding grazing (for example, allotment status and utilization standards), the RMP does not address stocking levels, seasons of use, or other details of livestock management. If monitoring shows that resource condition objectives established in the RMP are not being met, changes in livestock management practices will be made at the activity plan level to achieve those objectives.

National Recreation Area Proposal

In the past, there has been some discussion of creating a National Recreation Area in the eastern Sierra region. Though current interest is low, the possibility exists that some Bureau land in the Bishop Resource Area may eventually be considered for this designation. If a National Recreation Area proposal is developed that is inconsistent with this RMP, it will be considered through the plan amendment process.

National Conservation Area Proposal

The National Conservation Area designation is BLM's unique label for lands of outstanding character and national significance. Designation provides Congressional direction and support for multiple use management and conservation of BLM administered public land. No other federal agency uses this designation. There are presently five National Conservation Areas in existence and several other areas are being considered for this status. Since each National Conservation Area requires its own legislation, designation cannot be made through the RMP process. National Conservation Area status for the Bishop Resource Area would depend upon public and Congressional support for legislative action.

Activity Plans and Environmental Review

There are two levels of planning decisions: RMP and activity plan decisions. Those made in the RMP are general planning decisions. They provide overall guidance for resource use and allocation. Activity plans are site-specific and identify management actions needed to meet RMP objectives. For example, RMP decisions designate Areas of Critical Environmental Concern (ACECs) and establish general objectives for their management. Specific actions needed to meet those objectives will be established in ACEC management plans.

Since many site-specific actions will be required to meet RMP objectives, environmental review will be an ongoing part of the RMP implementation process. When site-specific actions or projects are proposed, site-specific environmental reviews will be conducted to analyze environmental impacts. These subsequent environmental analyses will comply with the requirements of the National Environmental Policy Act of 1969 (NEPA) and include appropriate public participation. The decision to allow or deny a specific action or project will be based on the environmental review process.

Monitoring and Evaluation

This phase of the RMP process completes the planning cycle. RMP decisions will be reviewed annually to track implementation and to determine if plan amendments are needed. Resources will also be systematically monitored to ensure that resource condition objectives established in the RMP are being met. BLM's Resource Management Planning process does not end with the RMP. Future management changes will be made based on monitoring and evaluation.

The implementation of RMP decisions is tracked using the Bureau's Decision Implementation Tracking System. This computerized tracking system, referred to as "DEC," consists of a summary of each RMP decision, the estimated cost to implement each decision, and a schedule for implementing each decision. Using DEC, all decisions are evaluated annually to assure compliance with RMP direction. The DEC system is also used to forecast annual funding needs and to determine when changes in the plan are necessary.

Activity plans will explain how, when, and where resources will be monitored. This monitoring will determine the effectiveness of Bureau actions in meeting resource condition objectives (for example, desired plant community goals and livestock utilization standards) established in the RMP. An interdisciplinary team will develop these plans for a variety of programs including livestock grazing (Allotment Management Plans), wildlife (Habitat Management Plans), off-highway vehicles (such as the High Desert Off-highway Vehicle Plan), and others.

Funding

The RMP's emphasis on recreation, wildlife and riparian management reflects public sentiment for resource management direction and embodies the Bureau's funding initiatives for the 1990s. Recreation 2000 and Wildlife 2000 are national strategy plans to improve Bureau management of public recreation and wildlife resources. They serve as catalysts for securing funds on a national scale, providing broad goals and objectives for Bureau programs. The RMP reflects these national priorities to allocate funding; it further serves as the basis to implement them at the field level. It is anticipated that these programs will receive the bulk of congressionally appropriated Bureau funds for the foreseeable future. Future Bishop Resource Area budget allocations will be tied to programs implementing these national strategy plans. Additionally, the resource area has demonstrated its success in securing contributed funds. It appears that contributed funds for recreation and wildlife will be ample throughout the 1990s and will augment Bureau appropriated funds. Public support for specific projects and programs will help acquire funding necessary to implement the plan.

Planning Guidelines

The following policies and guidelines give direction to this RMP.

General Policies [References are to the Federal Land Policy and Management Act of 1976 (FLPMA)].

1. Management will be on the basis of multiple use and sustained yield [Section 102(a)(7)].

2. Public lands are to be retained in federal ownership unless disposal serves the national interest [Section 102(a)(1)].

3. Public lands may be made available for disposal if they are difficult and uneconomic to manage and are not suitable for management by another federal department or agency [Section 203(a)(1)].

4. Public lands will be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use [Section 102(a)(8)].

5. Public lands will be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber including implementation of the Mining and Minerals Policy Act of 1970, as it pertains to the public lands [Section 102(a)(12)].

6. The Bureau will give priority to the designation and protection of Areas of Critical Environmental Concern [Section 202(c)(3)].

7. The Bureau will weigh long-term benefits to the public against short-term benefits [Section 202(c)(7)].

8. Management of public lands will consider:

    a. Safety of the public and Bureau personnel;

    b. Relative cost-effectiveness of managing individual tracts;

    c. Fiscal ability of the Bureau to effectively manage lands and interests (including easements) over the long term; and

    d. Alternative management schemes and creative partnerships with other agencies and organizations.

9. The BLM will not dispose of Wilderness Study Areas (WSAs), Areas of Critical Environmental Concern (ACECs) or other resources of high national interest to non-federal agencies. Disposal of the habitat of endangered, threatened or sensitive species to non-federal agencies or nonprofit organizations may be considered only if the protection and conservation that would be afforded the habitat following transfer of title equals or exceeds the level afforded by federal ownership. Such determination would be made by the State Director. Disposal of the habitat of officially listed endangered or threatened species would occur only after consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

10. BLM will continue to cooperate with the California Department of Fish and Game on Deer Herd Management Plans.

11. Site-specific inventories and analyses for endangered and threatened species, historic and prehistoric cultural properties, and mineral values are required prior to disposal of public lands and interests.

12. BLM will comply with the provisions of Sections 106 and 110 of the Historic Preservation Act including consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation for actions which may affect prehistoric and historic properties.

13. The Bureau will consult with local Indian communities to identify their concerns when projects might affect them. These concerns will be considered in the decision making process.

14. BLM will comply with the provisions of the Endangered Species Act of 1973, as amended, including consultation with the U.S. Fish and Wildlife Service on projects that may affect endangered or threatened species.

15. BLM will participate in the state's comment process to provide input on proposed water uses which may affect the public lands.

Area Manager's Guidelines

1. The preferred method of land tenure adjustment (both acquisition and disposal) is exchange. The Bureau intends to acquire lands from willing sellers.

2. Acquisitions and disposals identified in this RMP provide a list of parcels available for transfer. The Bureau intends to balance acquisitions and disposals such that no net decrease in private land occurs during the life of the plan.

3. Transfers of Bureau land to other agencies will be limited to small and isolated parcels.

4. Vegetation will be a key element in the plan and management will be directed toward the achievement of desired plant community goals.

5. Vegetative goals for watershed protection and wildlife, riparian and sensitive plant habitats will be given strong consideration in relationship to livestock forage needs. Permittee desired practices will be allowed provided vegetative goals can be met.

6. Rehabilitation of riparian areas will receive high priority for project implementation. Efforts will be made to return all watersheds in declining condition to equilibrium.

7. Actions that interfere significantly with efforts to maintain or enhance mule deer winter range will generally not be allowed.

8. Actions that interfere significantly with efforts to maintain or enhance sage grouse habitat will generally not be allowed.

9. Allotment Management Plans in the Bodie Hills Management Area will be developed or revised using the Coordinated Resource Management Planning (CRMP) process.

10. The RMP provides that off-highway vehicle use on all public lands will be limited to designated routes, with 1 open area (Poleta Canyon) identified. Specific route designations will be made in the on-going High Desert Off-highway Vehicle Study, the USFS/BLM Interagency Study, and the Coordinated Resource Management Planning (CRMP) process in the Bodie Hills. If the Southern Inyo Wilderness Study Area is designated as wilderness, the area will be closed to vehicle use.

11. Mineral leasing decisions within the Inyo and Toiyabe National Forest boundaries will be in conformance with the respective forest plans.

12. Fuelwood harvesting prescriptions will be compatible with those on adjacent National Forest System lands.

13. Fire management plans and policies will emphasize suppression cost reduction and fire prevention at the urban-wildland interface.

Valid Existing Management

Decisions and recommendations made in the following documents are still valid and will not be reanalyzed. Existing analysis is incorporated into this RMP/EIS by reference.

1. Benton-Owens Valley and Bodie-Coleville Grazing EISs (1981 and 1982). These documents cover 69 allotments and 633,980 acres of Bureau land. Decisions carried forward are summarized in Appendix 1.

2. Benton-Owens Valley/Bodie-Coleville Final Wilderness EIS (1987). This document covers 19 Wilderness Study Areas which include 287,876 acres of Bureau land.

3. California Vegetative Management EIS. Any herbicide use will be consistent with procedures and limitations described in the California Vegetation Management Final EIS and Record of Decision (November 1988).

4. Existing Coordinated Resource Management Plans (CRMPs), Habitat Management Plans (HMPs), Allotment Management Plans (AMPs), Area of Critical Environmental Concern (ACEC) Management Plans, Cooperative Agreements and Memoranda of Understanding (MOUs) will remain in effect. Existing plans and agreements will be updated as required to incorporate RMP decisions.

5. Bureau lands in the Mammoth-June Lakes Airport Land Use Plan Area will be managed in accordance with the Benton-Owens Valley Management Framework Plan amendment (1989) for that area.

6. The Cooperative Management Agreement with Bodie State Park will remain in effect.

Standard Operating Procedures

Standard Operating Procedures provide specific guidelines for managing the various resources and activities occurring throughout the resource area. Additional management direction and resource condition objectives are provided in the area-wide and management area specific decisions presented in Chapter 2.

Grazing Systems

1. Plant phenology of key forage species for livestock and wildlife will be considered in determining grazing schedules.

2. Grazing system design will include consideration of wildlife habitat, watershed and desired plant community goals.

3. Average annual livestock utilization of key forage species on meadows will not exceed 60% unless there is an Allotment Management Plan or desired plant community goal which requires a different level.

4. Allotment Management Plans will be used to resolve conflicts between livestock and other resource values.

Grazing Management Practices

1. Salting and supplemental feeding locations will not be located within 1/4 mile of riparian zones, aspen groves and meadows, or on sage grouse strutting grounds, sensitive plant habitats or sites that are highly susceptible to soil erosion.

2. Sheep will be herded.

3. Sheep bedding grounds will be designated, and will not be located within 1/4 mile of riparian zones, aspen groves,

meadows and sage grouse strutting grounds, or on sensitive plant habitats or sites that are highly susceptible to soil erosion.

4. Trailing use will be controlled and trailing routes will be identified.

5. Livestock conversions proposed by the permittee will be considered on the basis of resource needs, allotment capability and management objectives. If conversions are made mainly for convenience of the permittee, range improvement structures necessary to implement the conversion will be financed and constructed by the permittee.

6. Annual utilization checks will be conducted during the grazing season on selected meadows and key wildlife habitats.

7. Trampling of soils will be monitored in conjunction with forage utilization to determine whether the limit of allowable grazing has been achieved.

Range Improvement Project Development

1. Livestock watering and handling facilities (corrals, chutes, dipping vats, etc.) will normally not be located within 1/4 mile of riparian zones, aspen groves and meadows, or on sage grouse strutting grounds, sensitive plant habitats or sites that are highly susceptible to soil erosion.

2. Fences will not be located on sage grouse strutting grounds or sites that are highly susceptible to soil erosion. Let-down fences will be constructed in areas where sage grouse are susceptible to strikes on wire as they enter or leave a lek site.

3. Fence construction will conform with the objectives and specifications in Bureau Manual 1737.

4. All livestock watering facilities will be designed to facilitate wildlife use. Wildlife escape ramps will be installed and maintained in water troughs.

5. Springs and seeps incurring damage from livestock trampling will be fenced.

6. Benefits to range, fisheries, wildlife, recreation and watershed will be considered when designing range improvement projects.

7. Vegetation manipulation projects will be rested from grazing for at least two growing seasons following treatment.

8. Vegetation manipulation projects will use irregular patterns to create more edge. Islands of vegetation will be left for cover.

9. All chemical applications will be preceded by an approved Pesticide Use Proposal and supervised by a Certified Pesticide Specialist. Before chemicals are applied, the BLM will comply with Department of the Interior regulations and Bureau Manual 9222, and other applicable laws, regulations and court orders. Herbicide use will be prohibited within 150 feet of streams. Any pesticide (as defined under Section 2 (u) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended) used will be:

    a. Registered with the U.S. Environmental Protection Agency and the State of California;

    b. Specifically registered for the proposed use;

    c. Used only in accordance with requirements for safe mixing, storing, loading and disposal of such poisons;

    d. Marked with a current label;

    e. Used in accordance with its label and all applicable federal, state and local laws and regulations; and

    f. Applied so that worker safety is ensured.

10. Maintenance of structural improvements shall be provided by the user deriving the primary benefit from the improvement.

11. Brush control will be prohibited on sage grouse breeding complexes and wintering grounds.

12. All vegetation manipulations will leave 200 feet of undisturbed vegetation on both sides of all roads. Vegetation will not be manipulated on drainages with over 30% slope.

13. Seed mixtures adapted to the planting site will be used for seeding. Mixtures will include a variety of browse, forbs and grass species that are desirable for both livestock and wildlife. All seed sources will be certified "weed free."

14. Burned areas will be rested for three growing seasons before grazing.

Wildlife

1. Consult with the California Department of Fish and Game prior to design and accomplishment of wildlife habitat improvement projects.

2. Notify the California Department of Fish and Game one year in advance of any revegetation or vegetation manipulation projects.

3. Manage candidate species, sensitive species and other species of management concern in a manner to avoid the need for listing as state or federal endangered or threatened species.

4. Consult informally with the California Department of Fish and Game about any project with potential impacts on state-listed endangered or threatened plants and animals.

5. Consult with the California Department of Fish and Game about any proposals that may result in the depletion of resident or migratory fish.

6. An inventory for candidate species and other species of management concern will be completed prior to authorizing any activity that may impact a stream with a thermal source.

Riparian and Wetland

1. Maintain the natural channel configuration of all streams.

2. No new road construction will be permitted within 150 feet of riparian areas unless absolutely necessary and impacts can be mitigated. Avoid the construction of roads or trails that parallel streams.

3. Construction of new stream crossings will be kept to a minimum. All stream crossings will be designed and constructed to maintain existing channel morphology and minimize impacts to riparian and aquatic habitat. Crossings in streams supporting active or potential fisheries will be designed and constructed to allow fish passage. The streambed will be armored upstream and downstream of any crossing that has neither a bridge nor a culvert.

4. Relocate existing roads out of riparian areas where feasible or necessary to restore watershed stability.

5. Remove livestock watering facilities from riparian zones where feasible.

6. Rehabilitate or fence riparian areas that consistently show resource damage from any cause if conflicts cannot be resolved in another manner.

7. Avoid direct and indirect support of floodplain development or new construction in wetlands wherever there is a practical alternative.

Soil, Water and Air

1. An inventory of existing water quality and beneficial uses will be completed prior to

authorizing any project with potential impacts on water quality. Best Management Practices and appropriate mitigation will be identified during project level environmental review and applied during project implementation to ensure compliance with the Federal Antidegradation Policy.

2. Any activity involving discharge of dredged or fill material into waters of the United States or their adjacent wetlands will be reviewed for compliance with Section 404 of the Clean Water Act.

3. No stream modifying activities or other activities that increase sedimentation of the aquatic zone will be permitted during the following periods:

   a. February 15 to August 20 for streams with resident rainbow trout or cutthroat trout populations.

   b. October 1 to April 15 for streams with resident brown trout or brook trout populations.

4. Construction activities within streams will comply with the State Fish and Game Code as to notification and incorporation of appropriate mitigation measures.

5. Limit vegetation removal and other surface disturbing activities to the minimum required for project implementation. Require soil retaining structures or other special methods as needed to control erosion on steep slopes or unstable soils.

6. Best Management Practices and appropriate mitigation will be identified during project level environmental review and applied during project implementation for any ground disturbing activity that may reduce soil productivity, or cause surface erosion or mass wasting.

7. Avoid the use of soil disturbing equipment or vehicles on wet, poorly drained or erosive soils.

8. Require soil layer separation and topsoil stockpiling for any activity that involves mechanical soil disturbance. Soil layers will be redeposited and recontoured to their natural configuration following project completion.

9. Secure any necessary permits or clearances from state and local agencies relative to air quality requirements for projects that may impact air quality.

Minerals

1. Reclamation bonds will be required for all minerals actions occurring under a Plan of Operations in accordance with Memorandums of Understanding with Inyo and Mono Counties.

2. Claim markers must be in conformance with state law and Bureau policy.

3. All Notices of Intent will be reviewed for undue and unnecessary degradation determination. Cultural, endangered and threatened species, and sensitive plant habitat clearances will be done as a minimum.

4. All mineral operations will conform with the state's Surface Mining and Reclamation Act, and county and local health and operations requirements.

5. For abandoned mine shafts and mine shafts under a Plan of Operations, a survey for wildlife use, particularly bats, will be conducted. If bats are present, mines will be gated. Gate design will also consider the needs of other wildlife species potentially inhabiting the mine. If sealing of known hibernacula or maternity roosts must occur, sealing will not occur during the winter or maternity period. If surveys determine there is no use or potential for use by bats, sealing may be done at any time.

Realty

1. A site-specific environmental assessment will be required before any disposal of BLM land. Only parcels identified in the RMP will be available for disposal. All other BLM lands will be retained in public ownership.

2. All existing and future powerlines must meet non-electrocution standards for raptors. Raptor habitat enhancement will be incorporated into facility design where feasible.

3. The Bureau will file for state appropriative water rights for all existing and any new surface water facilities on which federal funding has been or will be expended. In addition, the Bureau will assert federal reserved water rights for Public Water Reserves.

Recreation

1. All Bureau lands will be designated as either closed, limited, or open to off-highway vehicle (OHV) use.

2. Off-highway vehicle (OHV) use will be monitored throughout the resource area. Monitoring efforts will be concentrated in Areas of Critical Environmental Concern, Wilderness Study Areas, other specially designated areas and areas incurring resource impacts. Mitigation, where needed, will be applied to eliminate or reduce resource problems caused by OHV use.

3. Within two years of the RMP/EIS Record of Decision, the BLM and Inyo National Forest will begin studies to make suitability or non-suitability determinations for waterways determined eligible under the Wild and Scenic River review process.

Visual

1. Enforcement emphasis for Visual Resource Management (VRM) classes 2-4 will be along key observation points. Outside key observation points, the Bureau will apply designated Visual Resource Management (VRM) class prescriptions but the Area Manager may allow development to exceed the VRM class for reasons such as technological infeasibility or low visitor use.

2. The Area Manager may allow temporary projects to exceed Visual Resource Management (VRM) standards in class 2-4 areas, if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two year period. During the temporary project, the Area Manager may require phased mitigation to better conform with prescribed VRM standards.

3. Visual Resource Management (VRM) classes acknowledge existing visual contrasts. Existing facilities or visual contrasts will be brought into VRM class conformance to the extent practicable when the need or opportunity arises (i.e. rights-of-way renewals, mineral material site closures, or route designation activity plans).

4. Visual Resource Management Class I enforcement will apply uniformly throughout the Conway Summit and Slinkard Valley Areas of Critical Environmental Concern and the suitable portion of Southern Inyo Mountains Wilderness Study Area unless subsequent activity plans specify otherwise.

5. All powerlines will be constructed using non-specular wire. Steel towers will be constructed of corten steel.

Determinations that are Not Made in this Plan

Bureau planning guidance does not require certain decisions if they can be derived from other decisions, the resource is not present or is of no interest, or if such a decision would be premature at this time. The following determinations meet one or more of these conditions.

1. No separate wilderness decisions are made in this plan. Wilderness recommendations were developed in the Benton-Owens Valley/Bodie-Coleville Final Wilderness EIS (1987) and corresponding Wilderness Study Reports.

2. No determinations are made relative to coal, oil and gas, or non-energy leasable minerals due to low occurrences of these resources and lack of interest at this time.

3. Site specific actions related to soil, water and air objectives are not made in this plan. While RMP decisions may affect these resources in general, specific decisions and actions relative to these will be made at the activity plan level. Best Management Practices, Standard Operating Procedures and appropriate mitigation measures will be applied in activity plans or at the project level to address site specific soil, water and air issues.

4. The Montgomery Pass Wild Horse Territory Coordinated Resource Management Plan (1988) established the criteria for determining desired wild horse population levels and actions required for wild horse management in this area. Therefore, these determinations are not made in this RMP.

Programs and Processes of Particular Interest

Computer Mapping

This is the first RMP in California fully supported by computer mapping techniques. All of the maps in this document, except those related to the utility corridor, were produced using the Bureau's Geographic Information System (GIS).

Many GIS generated products supported the RMP and its development. Statistical tables (area, length, frequency, etc.) were used to quantify existing resources and conflicts, proposed resource management decisions and allocations, and potential impacts. Map graphics were often produced to depict baseline data, resource conflicts and management decisions.

Desired Plant Communities

Desired plant community goals provide clearly defined vegetation condition objectives for specific vegetation types and supplement existing range condition class objectives. Desired plant community descriptions were developed for 9 key vegetation types that cover about 237,000 acres in the Bishop Resource Area (see Appendix 2 for descriptions). Vegetation types selected for desired plant community management were chosen primarily for their wildlife habitat, watershed and native plant community values. Another factor was their ability to respond to vegetation management techniques. Desired plant community goals are proposed for the following vegetation types in the final RMP:

Riparian
Aspen
Jeffrey pine
Dune
Pinyon-juniper
Old growth fir
Sagebrush-bitterbrush
Bristlecone-limber pine
Spring associated wetland

Specific locations and actions required to meet desired plant community goals will be identified at the activity plan level in Allotment Management Plans, Coordinated Resource Management Plans, ACEC Management Plans or Habitat Management Plans.

Wild and Scenic Rivers

Section 5d of the Wild and Scenic Rivers Act of 1968 directs the Bureau to identify and evaluate all waterways on public land as potential additions to the National Wild and Scenic Rivers System. Any segments determined by BLM to be suitable would be recommended to the President and eventually to the Congress for designation.

Although most people visualize a "wild and scenic river" as a large, cascading river, Congress provided a broader definition of the river types that should be considered for the national system. Section 16 of the Act defines the term river as "a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills and small lakes."

The Bishop Resource Area has begun evaluation of all its waterways for potential addition to the national system. The evaluation is a three step process and only the first two steps (eligibility determination and classification) have been completed. The final step, suitability determinations, will be initiated within two years after this RMP is approved. The evaluation process is outlined below:

Step 1: Eligibility Determination - In order to be eligible for inclusion, a river must be "free-flowing" and, with its adjacent land area, possess one or more outstandingly remarkable values. Appendix 2 in the draft RMP/EIS describes the eligibility determination process for all creeks in the Bishop Resource Area.

Step 2: Classification - This step classifies the river based on river condition and adjacent lands as they exist at the time of the study. There are three classification categories: wild, scenic, and recreational. Appendix 3 in the draft RMP/EIS explains the classification criteria and shows how they affect river management in the Bishop Resource Area.

Step 3: Suitability Determination - This final step provides the basis for the decision to recommend designation or non-designation of an eligible river segment. It is outside the scope of this RMP. Until the suitability studies are complete, the Bureau will prescribe interim protective measures (subject to valid existing rights) to all eligible river segments. The goal is to protect or enhance the free-flowing nature and outstandingly remarkable values of the river corridor. Site specific environmental reviews will be prepared for proposed activities in eligible river corridors (See Appendix 3 for interim protective measures).

Under all alternatives the following creeks are determined eligible for further study as potential additions to the Wild and Scenic River System. Potential classifications are also identified.

Rough Creek - Wild
Mill Creek - Wild
Rock Creek - Scenic
Hot Creek - Scenic
Atastra Creek - Scenic/Recreational
Fish Slough - Recreational
Virginia Creek - Recreational
Independence Creek - Recreational
Green Creek - Recreational
George Creek - Recreational
Dog Creek - Recreational

Scenic Byways

A 1986 study for the President's Commission on Americans Outdoor found that 43% of American adults identified driving for pleasure as a favorite leisure pursuit. Next to walking, pleasure driving is America's most popular form of recreation. In 1988, the Bureau made a commitment to support and participate in the National Scenic Byways program.

Although the Bureau's primary focus is to emphasize use of primitive backcountry roads, it is also committed to designate major road systems that pass through scenic areas on public lands. Primitive roads can be designated as backcountry byways. Major roads are designated as scenic byways. Both scenic and backcountry byways can be designated by the BLM State Director as part of the RMP approval process.

Within this RMP, 7 scenic byways and 1 backcountry byway are proposed for designation. These byways highlight the resource area's special scenic and recreation values. In cases where a proposed byway crosses other agency lands, the Bureau will seek the other agency's cooperation to jointly designate the route. Procedures for signing and interpretation will be identified at the activity plan level.

The proposed scenic byways are primarily paved or all-weather maintained roads suitable for standard automobiles. The proposed backcountry byway is not surfaced and usually requires a 4-wheel drive vehicle.

The following routes are proposed for byway designation:

Manzanar/Owenyo Roads - Scenic Byway
Movie Flat Road - Scenic Byway
State Highway 168 east - Scenic Byway
U.S. Highway 395 - Scenic Byway
Geiger Grade - Scenic Byway
Bodie Road - Scenic Byway
State Highway 89 - Scenic Byway
Bodie to Aurora Road - Backcountry Byway

Areas of Critical Environmental Concern

Area of Critical Environmental Concern (ACEC) designations highlight areas where special management attention is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values; fish and wildlife resources or other natural systems and processes; or to protect people from natural hazards. ACEC designation demonstrates that an area contains significant values or resources and requires the development of special management direction to protect those values or resources. The Federal Land Policy and Management Act (FLPMA) of 1976 provides that designation of ACECs be given priority in the development of land use plans.

The final RMP provides for the designation and management of 7 Areas of Critical Environmental Concern (ACECs). This includes the designation of 5 new ACECs and the validation of 2 existing ACECs. Areas proposed for management as ACECs are:

Fish Slough - 34,545 acres
Keynot Peak - 2,200 acres
Slinkard Valley - 10,520 acres
Bodie Bowl - 5,935 acres
Crater Mountain - 5,735 acres
Conway Summit - 2,700 acres
Travertine Hot Springs - 150 acres

Mineral Withdrawals

A long term need to protect sensitive and irreplaceable resources motivated the Bureau to maintain its existing mineral withdrawals as well as propose several new withdrawal locations. The RMP prescribes that 2,000 acres of existing mineral withdrawals continue in the Petroglyph Loop and Dogtown areas. It also proposes 3,100 additional acres for withdrawal along portions of the Pat Keyes trail, Dog Creek, and Virginia Creek; a portion of the Bodie Bowl ACEC; and the entire Travertine Hot Springs ACEC. If Congress designates the Southern Inyo Wilderness Study Area as wilderness, an additional 28,200 acres will be withdrawn. These areas represent about 4% of the resource area that would be withdrawn from mineral entry.

The public often considers a mineral entry withdrawal to be the most restrictive limitation the Bureau can implement to stop mining. A mineral withdrawal prevents the filing and location of new mining claims in a particular area after the withdrawal is approved by the Secretary of the Interior. Mining claims with a valid discovery that exist in an area before the approval date of a withdrawal could be developed. In these situations, the Bureau applies other existing laws, regulations, and guidance to direct mining activity to protect and maintain important resource values.

Interagency Transmission Line Corridor Study

It has been recognized for several years that there may be a need for additional transmission line corridors through the Owens Valley to transmit energy from sources in Nevada and elsewhere to the Los Angeles basin. On September 20, 1989, BLM and Inyo National Forest met to determine if a regional transmission line corridor study should be initiated. Because of the anticipated need for additional power in Southern California, it was decided to incorporate an interagency transmission line corridor study into the Bishop RMP. The Inyo National Forest would participate as a cooperating agency. Based on the results of this study, Inyo National Forest will issue a separate but consistent Record of Decision regarding transmission line corridor designation.

Three adjacent BLM jurisdictions decided not to participate directly in the study. However, they have completed brief studies of logical corridor extensions on their lands and concluded the extensions are tentatively feasible. They will be studied in each area's next planning cycle, or when a transmission line project is proposed.

Document Format

The format of this document parallels the format of the draft RMP/EIS. Background and introductory material are in Chapter 1. The proposed action and alternative management scenarios are presented in Chapter 2. Chapter 3 provides a brief description of key resources in the Bishop Resource Area. Chapter 4 addresses impacts. Chapter 5 briefly describes public and other agency involvement, and includes comments on the draft RMP/EIS and Bureau responses to the comments. The document also includes 7 appendices; a glossary; references cited; and an index.

Knowledge of the following may facilitate review of this document:

1. The Bishop RMP consists of two sets of decisions: Area-wide decisions and decisions specific to each of the nine management areas. There is also a decision specific to the Interagency Transmission Line Corridor Study. Decisions are summarized in Table 2-1.

2. The impact analysis is area-wide, not management area specific. Impacts specific to individual management areas are described where appropriate. Impacts are summarized in Table 2-2.

Chapter 2

Alternatives

Movie Crew Filming "Tremors" on the Volcanic Tableland.

Chapter 2
Alternatives

Introduction

This chapter presents the proposed action in its entirety. Four east-west transmission line corridor alternatives are also presented. A summary of all alternatives considered is presented in Table 2-1. For a detailed description of alternatives 1, 2 and 3, please refer to Chapter 2 of the draft RMP/EIS. Table 2-2 located at the end of this chapter provides a summary of the impacts of the alternatives.

The proposed action provides for the protection and enhancement of environmental values while allowing for resource use and development. Over 600 public comments were considered during preparation of the final plan. Strong public demand for environmentally sensitive management of Bureau lands was expressed throughout the early public scoping meetings, the pre-draft RMP public workshops, and the post draft RMP comment period. The RMP's emphasis on natural and recreational values is largely a response to this public demand.

In response to public comments, many decisions and support needs have been added, changed or clarified in the final RMP. Highlights of new decisions or decisions changed since publication of the draft include:

> A decision to replace or revise the existing watershed withdrawals rather than revoke them;
>
> Addition of a decision to assure no net loss of wetlands or riparian habitats;
>
> A change from average allotment-wide livestock utilization standards to maximum livestock utilization standards for key species;
>
> Elimination of the 5-year livestock use adjustment timetable;
>
> Replacement of the 40% livestock utilization standard within 2 miles of sage grouse leks with a measurable goal for desired habitat characteristics;
>
> Emphasizing protection of human and resource values in fire suppression efforts rather than full fire suppression;
>
> Elimination of the decision to encourage a change to sheep use on cattle grazing allotments in the Bodie Hills;
>
> Clarification of management objectives for the Bodie Bowl ACEC which include the addition of a locatable mineral withdrawal, development of Limits of Acceptable Change, and a change to Visual Resource Management Class 2;
>
> An increase in the amount of land available for disposal near Independence;
>
> Elimination of disposals in tule elk calving areas and dune habitats; and
>
> A decision not to designate an east-west transmission line corridor at this time.

Decisions presented in this chapter are illustrated on the following maps included with this volume:

> **Map 1 (Land Status)** - depicts land ownership in the Bishop Resource Area.
>
> **Map 2 (Special Management Areas)** - illustrates areas within the Bishop Resource Area deserving special management attention. The proposed Southern Inyo Wilderness Area, Areas of Critical Environmental Concern, campgrounds, streams eligible for study as potential additions to the Wild & Scenic Rivers System, and the Poleta Canyon off-highway vehicle open area are shown on Map 2.

Table 2-1. Area-Wide Summary of Decisions.

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Wildlife	Yearlong Protection: Some mule deer winter range; sage grouse leks; some plant communities.		Yearlong Protection: Some mule deer winter range and migration corridors; tule elk calving areas; sage grouse areas (within 1/3 mile of leks); endangered, threatened, candidate, and sensitive plant and animal habitats; several plant communities.	Yearlong Protection: Some mule deer winter range and migration corridors; tule elk calving areas; sage grouse areas (within 1/3 mile of leks); endangered, threatened, candidate, and sensitive plant and animal habitats; several plant communities.
	Seasonal Protection: Tule elk calving areas; sage grouse nesting areas (within 2 miles of leks).		Seasonal Protection: Other mule deer winter range; sage grouse nesting areas (within 2 miles of leks); sage grouse wintering areas.	Seasonal Protection: Other mule deer winter range; sage grouse nesting areas (within 2 miles of leks); sage grouse wintering areas.
			Desired Plant Community Acres: 114,758. Improve habitat for several species.	Desired Plant Community Acres: 105,158. No net loss of wetlands or riparian habitats. Improve habitat for several species.
Range	Open 3 allotments and expand 1 allotment when certain conditions are met. Prohibit livestock grazing on one unused allotment.	Open 3 allotments and expand 1 allotment when certain conditions are met.	Prohibit livestock grazing on 10 allotments. Change cattle to sheep use on 4 allotments.	Prohibit livestock grazing on 6 allotments. Allow grazing on the Larkin Lake Allotment to maintain wetland habitat.
	Prohibit livestock grazing in the South Inyo Management Area.	Prohibit livestock grazing in the South Inyo Management Area.	Prohibit livestock grazing in the South Inyo Management Area and Conway Summit ACEC.	Prohibit livestock grazing in the South Inyo Management Area and Conway Summit acquired land.

Table 2-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Range (continued)	Remove livestock grazing from 2 allotments when alternative areas are found.			Remove livestock grazing from 2 allotments when alternative areas are found. Remove livestock grazing from 2 allotments if current permittees transfer or relinquish their privileges.
	Average 60% utilization adjusted when conflicts with certain wildlife use.	Average 60% utilization adjusted when conflicts with certain wildlife use.	Average 60% utilization adjusted when conflicts with certain wildlife use.	Utilization will not exceed 60% on key species on all allotments. Livestock management changed when utilization level exceeded.
Recreation	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.	Wild and Scenic Rivers: 11 creeks eligible for study.
	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.	SRMAs: Bodie Bowl, Alabama Hills.
	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon.	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon.	OHVs: Limited to designated roads and trails (closure provision for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon. Snowmobile restrictions in sage grouse wintering areas.	OHVs: Limited to designated roads and trails (closure provisions for proposed Southern Inyo Wilderness Area). Open at Poleta Canyon. Snowmobile restrictions in sage grouse wintering areas.
	VRM I 4%, II 22%, III 69%, IV 5%	VRM I 4%, II 3%, III 72%, IV 21%	VRM I 6%, II 40%, III 52%, IV 2%	VRM I 6%, II 42%, III 50%, IV 2%
			Scenic Byways: 10 proposed.	Scenic Byways: 8 proposed.

Table 2-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Recreation (continued)			Provide for environmental education.	Establish an environmental education center.
Minerals	Salable: May be restricted in yearlong and seasonal protection areas.	Salable: Available for production with few restrictions.	Salable: May be restricted in yearlong and seasonal protection areas. Coleville consolidated to 1 pit. South Tableland closed.	Salable: May be restricted in yearlong and seasonal protection areas. Coleville consolidated to 1 pit. South Tableland closed.
	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 60,900 acres (8%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 30,900 acres (4%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 91,000 acres (12%) proposed for withdrawal.	Locatable: All lands open for locatable mineral entry except Dogtown and Bishop Petroglyph Loop (2,000 acres); 31,300 acres (4%) proposed for withdrawal.
	Geothermal: May be restricted in yearlong and seasonal protection areas.	Geothermal: Available for exploration and development; no surface occupancy in Bodie Bowl SRMA.	Geothermal: May be restricted in yearlong and seasonal protection areas; no leasing within 1 mile of selected hot springs.	Geothermal: May be restricted in yearlong and seasonal protection areas. Exploration and development permitted if no effect on thermal aquifer or surface water source.
Lands	Acquire 4,700 acres for wildlife habitat.		Acquire 41,700 acres for wildlife habitat, recreational, scenic or cultural resources.	Acquire 18,700 acres for wildlife habitat, recreational, scenic or cultural resources.

Table 2-1. Area-Wide Summary of Decisions (continued).

	Alternative 1 Present Management	Alternative 2 Custodial Management	Alternative 3 Natural Resource Enhancement	Alternative 4 Proposed Action
Lands (continued)	Dispose of 23,100 acres for agriculture, residential expansion, or community service.	Dispose of 24,200 acres for agriculture, residential expansion, or community service. Also lands that are difficult or uneconomical to manage.		Dispose of 9,000 acres for agriculture, residential expansion, or community service.
	Retain all watershed withdrawals.	Propose all watershed withdrawals for revocation.	Propose all watershed withdrawals for revocation.	Develop appropriate designation to replace watershed withdrawals.
ACECs	Travertine Hot Springs, Fish Slough.	Travertine Hot Springs, Fish Slough.	Travertine Hot Springs, Fish Slough, Slinkard Valley, Conway Summit, Bodie Mountain, Copper Mountain, Long Valley, Alabama Hills, Crater Mountain, Keynot Peak.	Travertine Hot Springs, Fish Slough, Slinkard Valley (reduced acreage), Conway Summit, Bodie Bowl, Crater Mountain, Keynot Peak.
Utility Corridors	Designate as corridors all lines 115kV and above.	Designate as corridors all lines 115kV and above.	None	Designate as corridors the 500kV DC Intertie; the 115kV SCE line from Bishop south.

Map 3 (Land Use Restrictions) - depicts Yearlong Protection and Seasonal Protection areas, existing and proposed locatable mineral withdrawals, and areas to be closed to grazing.

Map 4 (Lands and Minerals) - shows potential land acquisitions and disposals, designated utility corridors, areas open to mineral location, and preferred geothermal development zones.

Organization of the Proposed Action

The proposed action is presented in two parts: the area-wide proposed action, which presents management prescriptions valid throughout the entire Bishop Resource Area; and the proposed action for individual management areas, which presents management prescriptions specific to each of the nine management areas.

The plan consists of four components:

Management Themes: Statements of the general management philosophy for each management area. Management themes provide direction for addressing unforseen proposals.

Decisions: Statements of land use allocations and resource condition objectives.

Support Needs: Supplemental actions necessary to implement the plan. Support needs will help guide BLM budgeting and programming.

Rationales: Explanations for selection of the proposed action.

Proposed Action

Area-Wide

Management Theme

Resolve issues in a manner that will protect and enhance environmental values while allowing for resource use and development.

Decisions

Unless otherwise stated in the plan, all Bureau lands will be retained in public ownership. Lands identified for disposal are either difficult or uneconomic to manage and would best serve the public interest in private ownership. Land disposal may also be used to resolve inadvertent occupancy trespass (cases where survey error has resulted in home construction on Bureau land). Bureau lands will not be available for disposal under the agricultural land laws.

- Land exchange is the preferred method of disposal. Where land exchange is impractical, lands identified for disposal may be sold under authority of the Federal Land Policy and Management Act of 1976.

- Disposals to resolve inadvertent occupancy trespass will be limited to the smallest legal subdivision which includes the private development.

- Recreation and Public Purpose Act patents may be issued on lands identified for disposal.

Prohibit groundwater pumping where it would interfere with valid existing water uses, desired plant community goals, or other resource condition objectives.

Replace or revise the Executive Order and Congressional Watershed Withdrawals. Any replacement or revised designation must retain the Bureau's "4e" comment authority and protect federal water rights to the same extent they are protected under the existing withdrawals.

Utility Corridors 1/2 mile wide are designated along the following transmission lines:

- The 500 kV DC Intertie from where it enters California near State Highway 167 to where it exits the resource area near Olancha.
- The 115 kV SCE Double Circuit Line from the Bishop Substation to where it exits the resource area near Olancha.

  The following conditions and mitigation measures apply to these corridors:

  1) Corridors extend for 1/4 mile on both sides of the specified lines with the following exceptions:
     a) In the vicinity of Benton Hot Springs the corridor is limited to 1/4 mile west of the DC Intertie.
     b) Between and along Wilderness Study Areas (WSAs) on the Volcanic Tableland, future lines will have to share existing facilities until one or all of the WSAs are released to non-wilderness uses by Congress.
  2) Future facilities in these corridors may be allowed to exceed Visual Resource Management and Yearlong Protection standards. Extensive mitigation will be required and may include, but is not limited to:
     a) Painting and use of non-specular steel materials to reduce visibility.
     b) Requiring the use of shared facilities.
  3) The first applicant for a right-of-way in either corridor will be required to conduct a study to determine how many transmission lines the corridor can accommodate.

Manage the resource area to provide for a variety of dispersed recreation opportunities. Emphasize primitive, semi-primitive motorized, semi-primitive nonmotorized and roaded natural experiences. Maintain and enhance semi-primitive and other physical settings by providing compatible recreational opportunities within those settings. Manage visitor use to conform with semi-primitive and other physical settings. Recreation management may include developing trails for hiking, mountain biking and horseback riding; providing off-highway vehicle use opportunities; designating scenic byways; interpreting natural and cultural resources; and establishing an environmental education program. The Bodie Bowl and the Alabama Hills will remain designated as Special Recreation Management Areas (SRMAs).

- Manage the Bodie Bowl SRMA to preserve the historic integrity of the Bodie National Historic Landmark in coordination with Bodie State Historic Park.
- Manage the Alabama Hills SRMA to protect unique geologic features and scenic values and to provide compatible recreational opportunities.
- Provide campgrounds at Tuttle Creek, Goodale Creek, Horton Creek (Owens Valley Management Area) and Crowley Lake (Long Valley Management Area).
- Vehicle use is limited to designated roads and trails on 748,700 acres. Poleta Canyon is open to vehicle use on 1,300 acres. If Congress designates the Southern Inyo Wilderness Study Area as wilderness, 28,200 acres will be closed to vehicle use (see Figures 2-1 and 2-2). Some seasonal closures will be designated in the resource area in off-highway vehicle management plans. Snowmobile use will be limited to designated areas and routes.

OFF HIGHWAY VEHICLE DESIGNATIONS

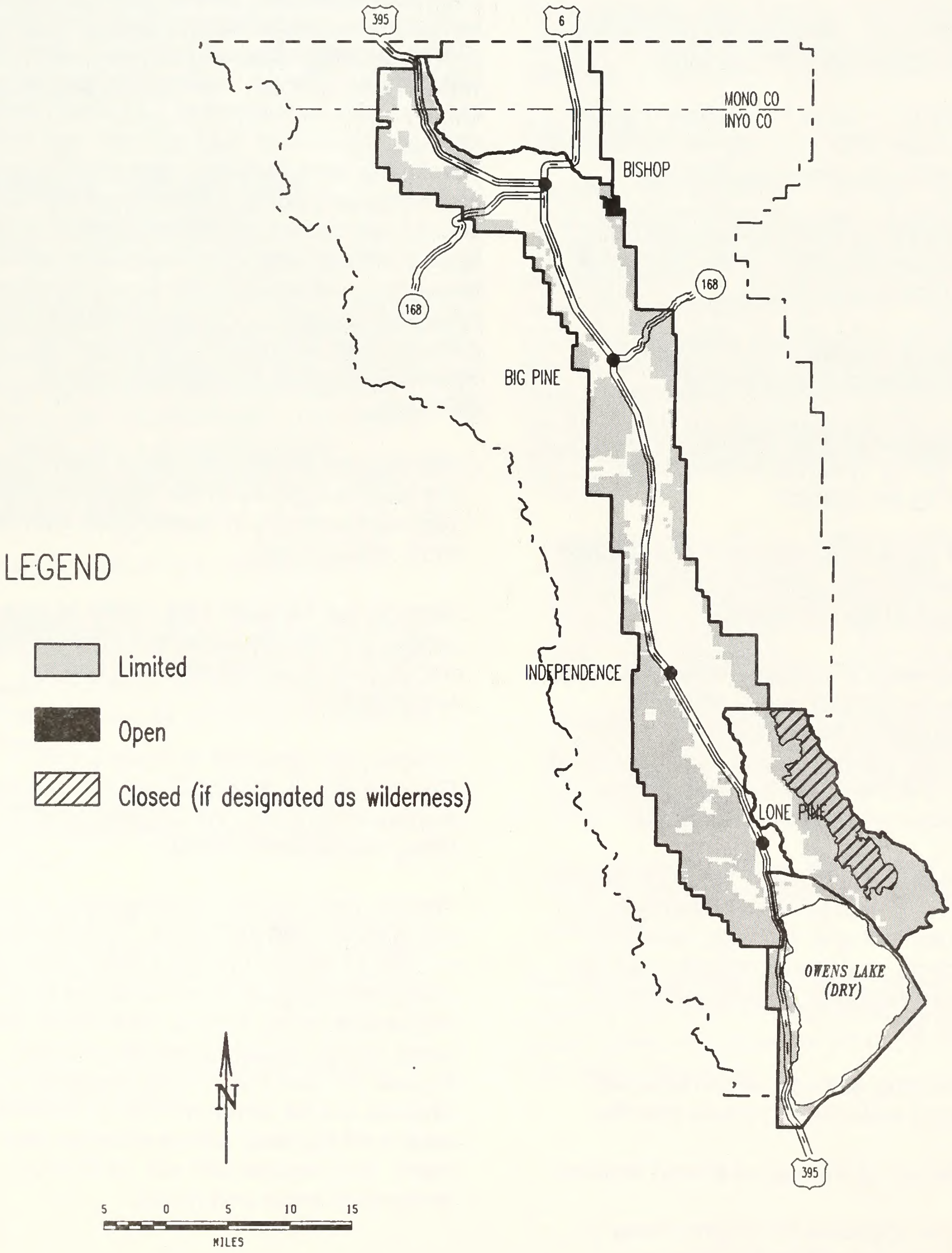


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Figure 2–1

OFF HIGHWAY VEHICLE DESIGNATIONS

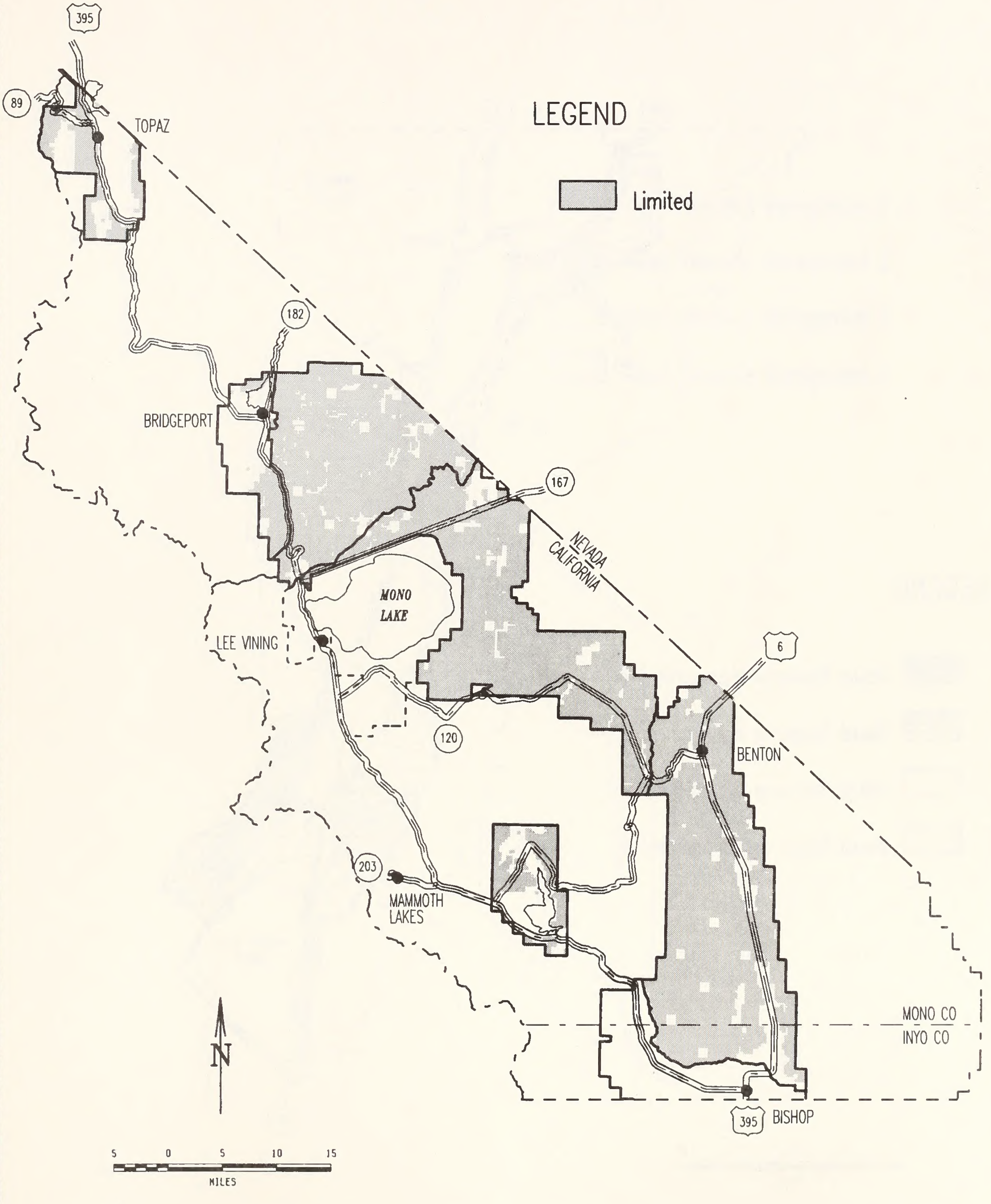

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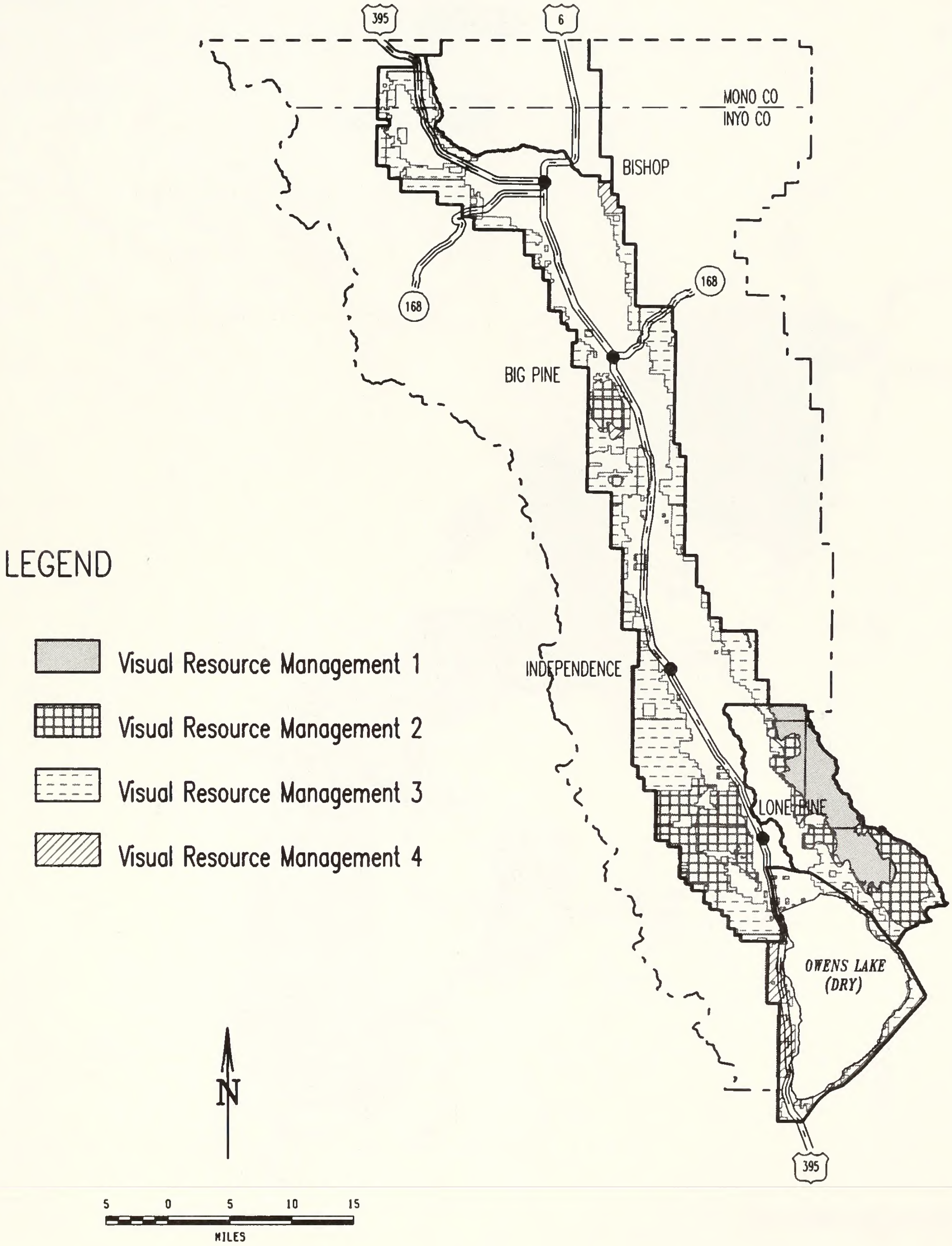
Figure 2–2

VISUAL RESOURCE MANAGEMENT


395
6
MONO CO
INYO CO
BISHOP
168
168
BIG PINE
INDEPENDENCE
LONE PINE
OWENS LAKE (DRY)
395
LEGEND
Visual Resource Management 1
Visual Resource Management 2
Visual Resource Management 3
Visual Resource Management 4
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MILES

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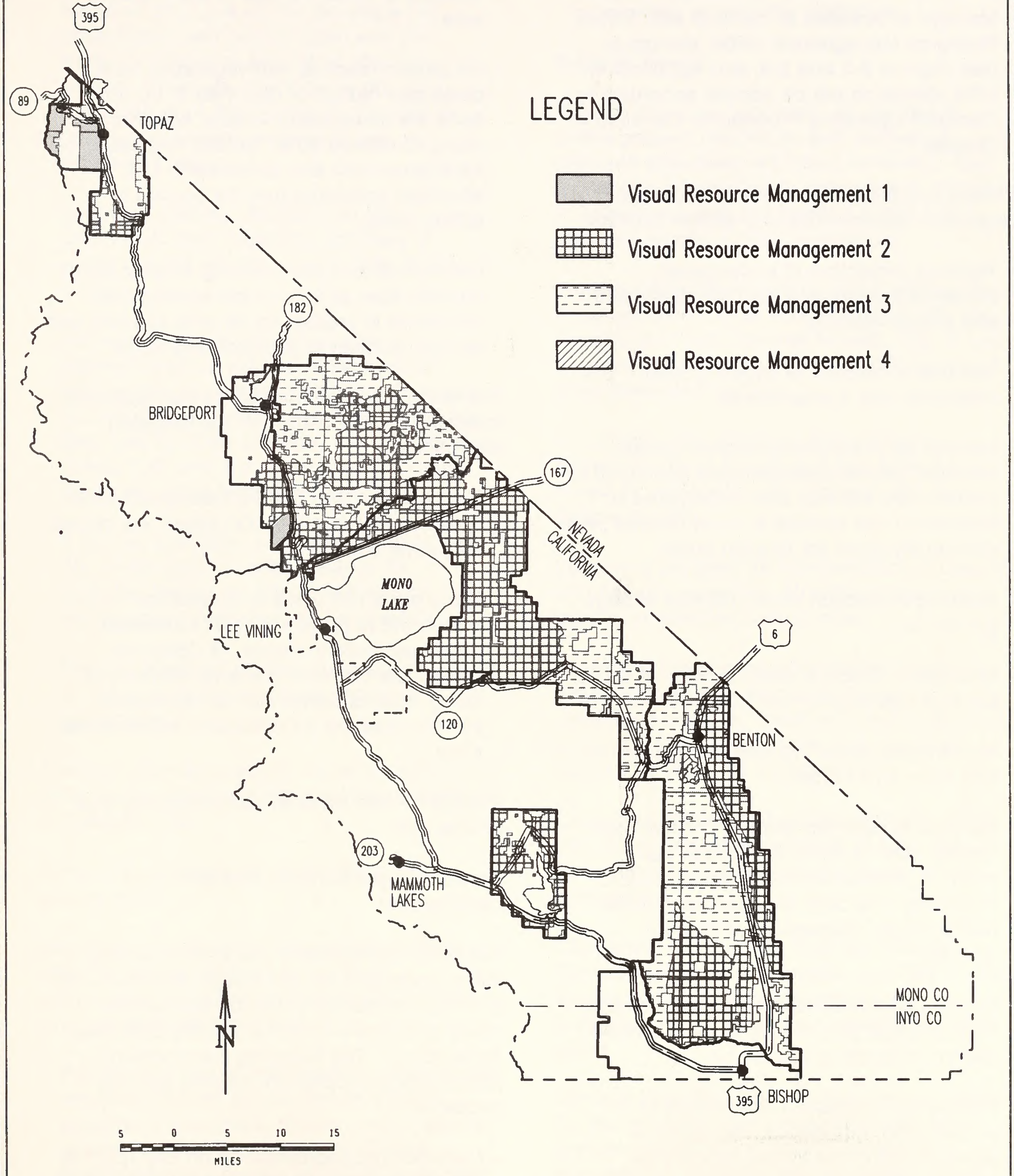
VISUAL RESOURCE MANAGEMENT



(NORTH HALF)

Figure 2–4

- Designate U.S. Highway 395 along all Bureau land in Mono County as a Scenic Byway.

- Manage all activities to conform with Visual Resource Management (VRM) standards (see Figures 2-3 and 2-4, and Appendix 4). VRM standards will be applied according to Standard Operating Procedures identified in Chapter 1.

Protect and enhance unique or important vegetation communities and wildlife habitats.

- Yearlong Protection of endangered, threatened, candidate, and sensitive plant and animal habitats.

- Yearlong Protection of aspen groves, meadows and riparian areas.

- Manage all stream reaches that contain essential habitat characteristics described in the recovery plan for any endangered or threatened fish species to meet desired plant community goals for riparian areas.

- Yearlong Protection within 1/3 mile of sage grouse leks.

- Seasonal Protection within 2 miles of active sage grouse leks from 5/1 to 6/30.

- No camping within 1/3 mile of sage grouse leks from 3/1 to 6/30.

- Increase to 60% the amount of sagebrush habitat within 2 miles of leks that has optimum characteristics for sage grouse. (Presently only 30% of sagebrush habitat has optimum characteristics for sage grouse).

- Manage sagebrush-bitterbrush areas within 2 miles of sage grouse leks to meet desired plant community goals.

- Pursue the acquisition of wetlands or endangered, threatened, candidate or sensitive plant and animal habitats as opportunities arise.

- Manage all activities to assure no net loss of wetlands or riparian habitats. Allow mitigation for impacts to wetlands or riparian habitats to occur outside of the resource area.

- On stream reaches with vegetative bank protection ratings of less than 3, do not allow the streambank artificial soil alteration rating to exceed 20%. Stricter vegetative bank protection and streambank soil alteration standards may be applied in activity plans.

- Maintain 95% of the previous 10 year mean monthly flow, or 95% of the existing flow, whichever is greater, for all area streams and springs, subject to valid existing rights.

The entire resource area will remain open for locatable mineral entry with the following exceptions:

- The Dogtown and Bishop Petroglyph Loop mineral withdrawals (2,000 acres) are closed to mineral entry.

- There are 3,100 acres proposed for withdrawal to protect wildlife, recreation, visual and historic values. If Congress designates the Southern Inyo Wilderness Study Area as wilderness, an additional 28,200 acres will be withdrawn from mineral entry.

Provide salable minerals for community and private use.

Provide for geothermal exploration and development.

Livestock management practices including initial stocking rates and forage allocations are based on decisions in the Benton-Owens Valley and Bodie-Coleville Grazing EISs (see Appendix 1). The following management prescriptions supplement existing grazing decisions:

- Livestock grazing utilization on key species will not exceed 60% on any allotment unless a different level is specified in an activity plan. When utilization levels, verified through monitoring, exceed 60% a change in livestock management practices will be implemented to achieve the 60% level. Required changes will be developed in consultation and coordination with the livestock permittee and other affected parties. Changes may include one or a combination of the following: changes in grazing preference, season of use, or location of use.

- Livestock grazing utilization on bitterbrush within mule deer migration corridors or winter ranges will not exceed 30% of annual growth.

- Manage livestock use of sagebrush vegetation types within 2 miles of sage grouse leks to achieve shrub structure and density characteristics more homogeneous (less patchy) than average. Horizontal cover (grass, forb and shrub combined) in these areas will range between 8 and 20%.

- If tule elk numbers decline to less than 440 due to competition with livestock for available forage, a change in livestock management practices will be considered.

- Prohibit livestock grazing in unallotted areas or areas outside of existing allotment boundaries.

Manage cultural resources for information potential by initiating data recovery projects at threatened sites.

Allow only noncommercial harvesting of pinyon nuts.

Limit the intensity of fire suppression efforts used to control wildfires to the most economical response consistent with human and resource values at risk.

- Prohibit the use of bulldozers or other heavy equipment in old growth timber stands, prominent viewsheds, riparian areas, aspen groves, cultural sites, Areas of Critical Environmental Concern (ACECs), mule deer winter ranges, the Alabama Hills and the entire South Inyo and Owens Lake management areas. This restriction may be lifted by the Area Manager to protect human life, private property, structures, visitor safety or sensitive or valuable resources.

Support Needs

Monitor resource conditions as needed to define present conditions and evaluate if resource objectives are being achieved. Use monitoring information to determine if changes to authorized uses are needed and if those changes require a plan amendment.

Prepare off-highway vehicle designation and implementation plans in cooperation with the Toiyabe and Inyo National Forests, City of Los Angeles Department of Water and Power, and other interested parties.

Coordinate with CalTrans, Mono County, Toiyabe National Forest and Inyo National Forest to designate U.S. Highway 395 as a Scenic Byway.

Develop a program for interpretation of cultural and natural resources. Provide interpretive signing at selected cultural sites.

Develop a program to educate the public on the values of preserving their historic and prehistoric heritage. Work with public schools to enhance their curriculum and to provide training for teachers and students.

Coordinate all fish and wildlife reintroductions with the California Department of Fish and Game and other agencies or groups as appropriate.

Cooperate with the U.S. Fish and Wildlife Service and other appropriate agencies on the development and implementation of endangered and threatened species recovery plans.

Develop Waterfowl Habitat Management Plans for the resource area. Include actions to protect nesting areas, construct habitat improvement projects, and complete habitat inventories and nesting surveys.

Design and implement habitat improvement projects in cooperation with the Rocky Mountain Elk Foundation, Mule Deer Foundation, Ducks Unlimited, Quail Unlimited, Cal Trout and other conservation organizations.

Coordinate with the Inyo and Toiyabe National Forests on the administration of grazing allotments with common operators.

Quantify instream flows over a 10 year period with the following management area priority: (1) Owens Valley, (2) Bodie Hills and Bridgeport Valley, (3) Coleville, (4) Benton and Long Valley, and (5) Granite Mountain, Owens Lake and South Inyo.

Identify all salable mineral deposits. Develop a coordinated mineral material sales program with other appropriate agencies. Complete fair market value appraisals for all salable minerals.

Modify the fire suppression plan to incorporate fire-related decisions. Include burn prescriptions to allow for the implementation of limited and modified suppression techniques.

Use prescribed burning to support desired plant community, fire prevention and wildlife habitat goals.

Update the Fuelwood Management Plan.

Rationale

The BLM has the responsibility to manage public lands and resources to provide for a variety of uses. Through the RMP process, the BLM and the public have painted a picture of the resource conditions and activities they desire to see on these lands. Decisions in the RMP are designed to enhance our ability to achieve this picture. Many of the decisions provide guidelines and standards which all activities will follow so the picture can become reality. Because of overwhelming public desire, we have placed an emphasis on environmental values in this RMP.

Over 8,000 acres of Bureau land are identified for potential disposal, and over 18,000 acres of private land are identified as potential acquisitions. The large amounts of land in each category are intended to provide flexibility for land exchanges. If an opportunity arises for a land exchange which would allow us to acquire prime habitat or improve management of public lands and resources, the exchange could occur without a plan amendment. It is doubtful that even 25% of the proposed disposals and acquisitions will be completed within the life of the plan.

Groundwater pumping and water export have been central issues in the eastern Sierra for several decades. BLM's position is clarified with the decision to protect local resource conditions by prohibiting groundwater pumping on Bureau land where it would interfere with valid existing water rights, desired plant community goals, or other resource condition objectives.

Watershed withdrawals no longer serve the purpose for which they were originally designed. These withdrawals place serious constraints on our ability to properly manage the land. A change in the watershed withdrawals is proposed that would improve our ability to manage Bureau land, protect federal water rights, and maintain our "4e" comment authority.

The 500 kV DC Intertie and the 115 kV SCE Double Circuit lines are administratively designated as transmission line corridors because analysis showed that the impact of additional lines in these areas would be acceptable. The 115 kV lines to Mammoth and around Long Valley were not designated because existing lines have sufficient capacity to handle anticipated population growth and geothermal development during the next 15 years. There are also visual and land stability concerns where these lines follow U.S. Highway 395.

Recreation is a mainstay of the eastern Sierra economy. The type best suited for Bureau lands is predominantly dispersed use in semi-primitive, undeveloped settings. RMP decisions stress the maintenance and enhancement these settings. They also provide for a variety of recreation opportunities that are compatible with those settings and other RMP prescriptions. Future development of semi-primitive recreation opportunities will include management of uses compatible with the semi-primitive physical setting.

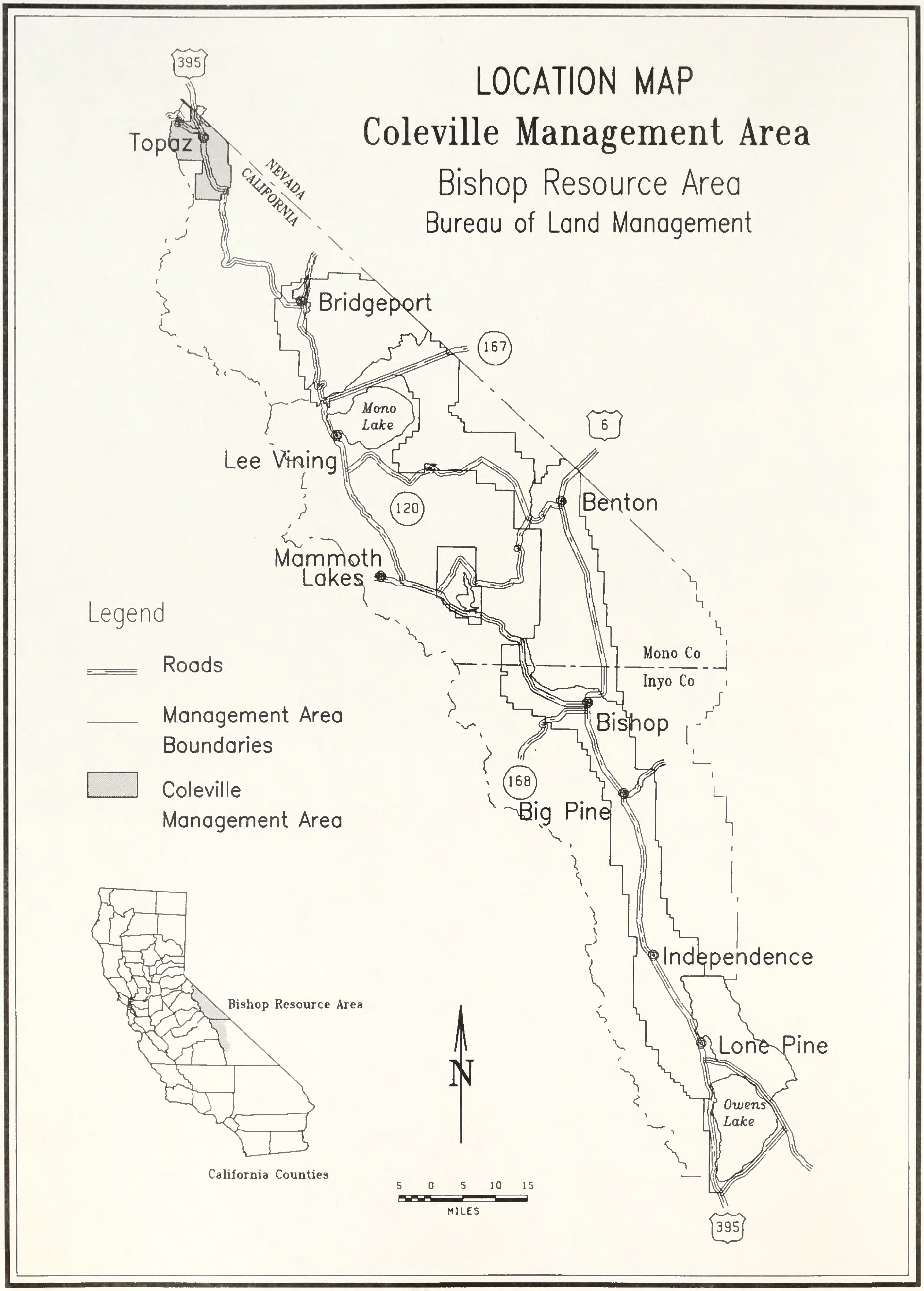
Scenery is an important value to visitors who travel to the eastern Sierra. Visual resource management was strengthened in the preferred alternative to increase protection for areas of high scenic quality and to reduce cumulative adverse impacts on visual resources in the region. Since the early 1980s, Americans have grown increasingly sensitive to impairment of scenic landscapes and environmental values. They prefer increased environmental protection and appear to be willing to incur costs associated with that protection. The RMP's emphasis on visual resource management reflects that viewpoint.

The "limited" off-highway vehicle designation which covers most of the resource area is necessary to prevent adverse impacts that would result from unrestricted use. Detailed activity plans, developed with public participation, will identify specific vehicle use opportunities and restrictions.

Wildlife resources are another important value in the eastern Sierra region. Bureau lands provide habitats for a variety of plant and animal species and the public has expressed growing concern for proper management and protection of these habitats. Numerous decisions in the RMP emphasize protection and enhancement of important plant and animal habitats without eliminating other land uses.

The existing mineral withdrawals on the Bishop Petroglyph Loop and at the Dogtown historic site will continue to protect cultural resources. Additional withdrawals, such as the withdrawal near Bodie State Historic Park, are proposed in specific management areas to protect important historic, wildlife, riparian, and recreation values. Withdrawals were not proposed to protect endangered, threatened, and candidate species since most habitats occur in areas with low mineral potential or on sites already under valid claim.

Livestock grazing decisions are not being made in most areas because decisions based on the range EISs completed in the early 1980s are still valid. In addition, federal grazing regulations and BLM rangeland monitoring policy allow for changes in grazing use based on monitoring of resource conditions. The RMP establishes resource condition objectives that will alter livestock management in some areas and improve management of important vegetation and habitat types.



LOCATION MAP
Coleville Management Area
Bishop Resource Area
Bureau of Land Management

Figure 2-5

Management Theme

Manage with an emphasis on wildlife habitat enhancement. Species of concern are mule deer, mountain beaver and species associated with old growth forests. Secondary emphasis is on visual resources and recreation.

Decisions

Dispose of up to 45 acres for patent of existing Recreation and Public Purpose Act leases for the Walker Landfill and the Toiyabe Indian Health Clinic.

Acquire up to 846 acres of private land west of U.S. Highway 395 to protect mule deer winter range and scenic values. No private homes will be acquired.

Enhance semi-primitive dispersed recreation opportunities such as hunting, fishing, wildlife viewing, hiking, camping and biking.

Designate a Scenic Byway along portions of State Highway 89.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM I - Slinkard Valley ACEC.
- VRM III - North of State Highway 89 and east of Antelope Valley.
- VRM II - Remainder of the area.

Yearlong Protection of mule deer winter range east of Eastside Lane.

Enhance habitat for native quail populations.

Manage Mill Creek, Slinkard Creek, Slinkard Creek Tributaries 1 and 2, and Rodriguez Creek so they remain suitable for reintroduction of Lahontan cutthroat trout.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 50 acres (100%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.
- Meet DPC goals on 120 acres (100%) of aspen to increase wildlife habitat diversity and reduce erosion.
- Meet DPC goals on 370 acres (100%) of old growth white fir to maintain habitat diversity, provide habitat for old growth associated species and ensure adequate forest regeneration.
- Meet DPC goals on 7,435 acres (75%) of pinyon-juniper to increase wildlife habitat diversity and improve mule deer habitat.
- Meet DPC goals on 850 acres (75%) of sagebrush-bitterbrush to provide cover and forage for mule deer.

Designate 10,520 acres that includes Slinkard Valley as the Slinkard Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to protect wildlife habitat and scenic values and to enhance recreation opportunities. The following management prescriptions apply to actions occurring within the ACEC:

- Maintain and improve habitat conditions for mountain beaver (Category 2 species) by limiting the types of uses and vegetative treatments allowed in riparian zones.

- Yearlong Protection of old growth white fir stands.

- Manage all activities to conform to VRM I standards.

- Eliminate livestock grazing on the Dry Canyon and Slinkard Valley allotments if alternative grazing areas are found.

Protect and interpret the historic Golden Gate Mine site.

Consolidate salable minerals to one pit.

Actions within the State-designated corridor of the Walker River will be consistent with the State Wild and Scenic River designation.

Prohibit timber harvesting in old growth areas. Allow commercial and non-commercial fuelwood harvesting of live pinyon and juniper to improve wildlife habitat or meet desired plant community goals. Dead wood (down only) may be collected for campfire use.

Support Needs

Coordinate with CalTrans, BLM Carson City District, Toiyabe National Forest and Mono County to designate State Highway 89 as a Scenic Byway.

Coordinate any recreation management for Topaz Lake with Mono County and the Walker River Irrigation District.

Develop a Habitat Management Plan for the West Walker deer herd in cooperation with the California Department of Fish and Game and Toiyabe National Forest.

Develop water sources for mule deer east of Eastside Lane.

Develop water sources for native quail populations.

Develop an activity plan for the Slinkard ACEC that emphasizes wildlife, scenic and recreational values.

Implement measures to restore meadows and control erosion in Slinkard and Little Antelope Valleys to improve habitat for Lahontan cutthroat trout and other riparian dependent species. Coordinate these activities with the California Department of Fish and Game and Toiyabe National Forest.

Monitor water quality to determine the impacts of cattle and recreational use.

Develop protective and interpretive measures for the Golden Gate Mine site.

Inventory old growth white fir stands for presence and abundance of the southern spotted owl. Evaluate these stands for spotted owl habitat suitability.

Survey bald eagle habitat near Topaz Lake to assess management needs.

Rationale

The Coleville Management Area has significant natural resources including old growth timber, key deer winter range, potential habitat for Lahontan cutthroat trout, and habitats that support a diverse assemblage of wildlife species such as pine marten, blue grouse, black bear, mountain beaver and waterfowl. These resources are receiving increased pressure from expanding communities and uncontrolled dispersed recreational use. There is tremendous potential to manage and increase recreational use while lessening impacts to the natural resource base. Many visitors who pass through the area do not realize the scope of recreation opportunities available in this management area.

These decisions will protect and enhance natural resources, while improving recreation opportunities. They also provide some land for local community services. With more intensive management, it will be possible to both increase recreational use and control adverse impacts to the natural environment. ACEC designation for the area surrounding Slinkard Valley will provide additional protection and recognition of the outstanding biological diversity and scenery of this relatively small area.

LOCATION MAP
Bridgeport Valley Management Area
Bishop Resource Area
Bureau of Land Management

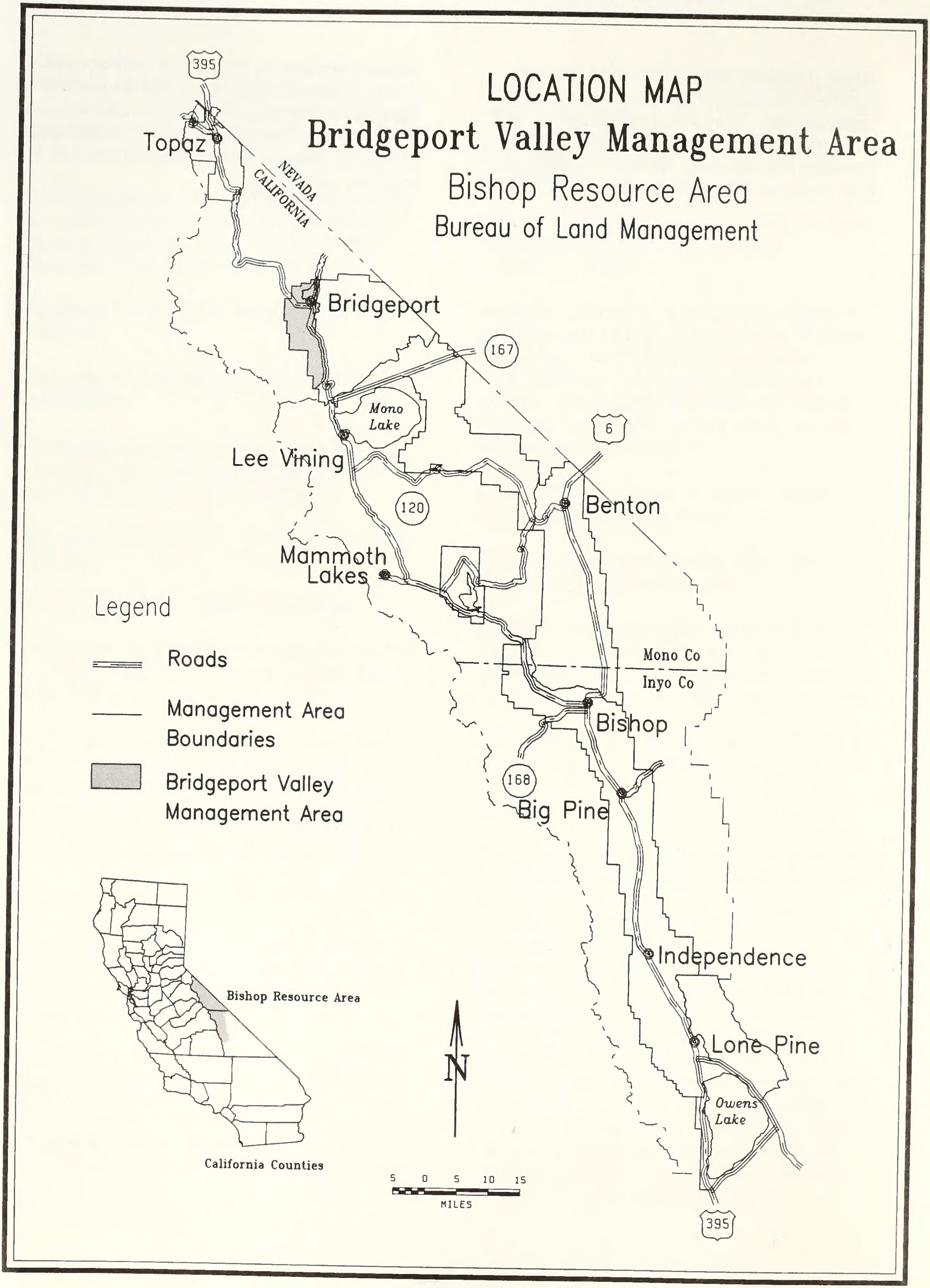


Figure 2-6

Management Theme

Emphasize scenic, recreational, cultural and wildlife values in the Virginia Creek and Dog Creek areas while accommodating some community needs near Bridgeport.

Decisions

Dispose of up to 270 acres to provide for residential expansion and community services.

Acquire up to 1,338 acres of private land to protect riparian, wildlife and scenic values.

Enhance semi-primitive dispersed recreation opportunities such as hunting, fishing, wildlife viewing, hiking, camping, biking and snowmobiling.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM I - Conway Summit ACEC.
- VRM II - Southern block of Bureau lands.
- VRM III - Remainder of the area.

Manage the marshes in Sections 18 and 19 on the west side of Bridgeport Reservoir to enhance waterfowl habitat and provide waterfowl hunting and viewing opportunities.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 100 acres (75%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.
- Meet DPC goals on 470 acres (75%) of aspen to increase wildlife habitat diversity and reduce erosion.
- Meet DPC goals on 85 acres (75%) of wet meadows to increase habitat diversity and reduce erosion.
- Meet DPC goals on 1,780 acres (25%) of sagebrush-bitterbrush to provide cover and forage for mule deer and sage grouse.

Designate 2,700 acres near Conway Summit as an Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to protect scenic values and to enhance dispersed recreation opportunities. The following management prescriptions apply to actions occurring within the ACEC:

- Yearlong Protection of the ACEC. Target resources are scenery, riparian habitat and recreation opportunities.
- Prohibit livestock grazing on the Conway Summit acquired lands.
- Manage all activities to conform to VRM I standards.
- Enhance dispersed recreation opportunities such as winter sports, camping, mountain biking and hiking.

Retain the Travertine Hot Springs Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to enhance recreation opportunities and to protect candidate species habitats, unique geologic features and cultural resources. The following management prescriptions apply to actions occurring within the ACEC:

- Yearlong Protection of the ACEC. Target resources are recreation opportunities, candidate species habitats, geologic features, and cultural and Native American values.

- Geothermal exploration and development will be allowed only if evidence is provided which shows no impact to the thermal aquifer or surface water source would occur.

- Prohibit shooting in the ACEC.

- Propose the ACEC for withdrawal from locatable mineral exploration and development.

Protect and interpret the Dogtown historic site.

Propose the following stream reaches for withdrawal from locatable mineral exploration and development:

- Dog Creek from Dunderberg Creek to 1.5 miles downstream.

- Virginia Creek from the Toiyabe National Forest boundary to the south boundary of the Dogtown locatable mineral withdrawal.

Provide salable minerals at the Green Creek mineral material pits.

Support Needs

Coordinate recreation management with the Toiyabe National Forest. Focus management efforts along Virginia Creek between Conway Summit and the National Forest boundary.

Coordinate any recreation management for Bridgeport Reservoir with Mono County and the Walker River Irrigation District.

Acquire access around Bridgeport Reservoir to enhance recreation opportunities. Avoid wetland habitat.

Develop interpretive facilities at waterfowl areas in Sections 18 and 19.

Participate on the Mono County Wetlands Technical Advisory Committee. Support the development of a Special Area Management Plan for wetlands in Bridgeport Valley.

Participate with appropriate agencies in determination of Bridgeport Reservoir water level.

Develop a comprehensive Wildlife Habitat Management Plan for the Bridgeport Valley and Bodie Hills management areas.

Develop an Allotment Management Plan for the Green Creek Allotment.

Develop an activity plan for the Conway Summit ACEC that emphasizes scenic values and recreational uses including camping, mountain biking, hiking and winter sports.

Develop an activity plan for the Travertine Hot Springs ACEC that emphasizes recreational use and protection of candidate species habitats, geologic features, and cultural and Native American values.

Develop a hydrologic model of Travertine Hot Springs to provide the basis for impact assessment on geothermal exploration or development.

Explore cooperative management of the Travertine Hot Springs ACEC with Native Americans and other groups.

Provide a BLM information outpost at the Dogtown historic marker on U.S. Highway 395.

Coordinate with CalTrans to relinquish and rehabilitate selected mineral material pits.

Rationale

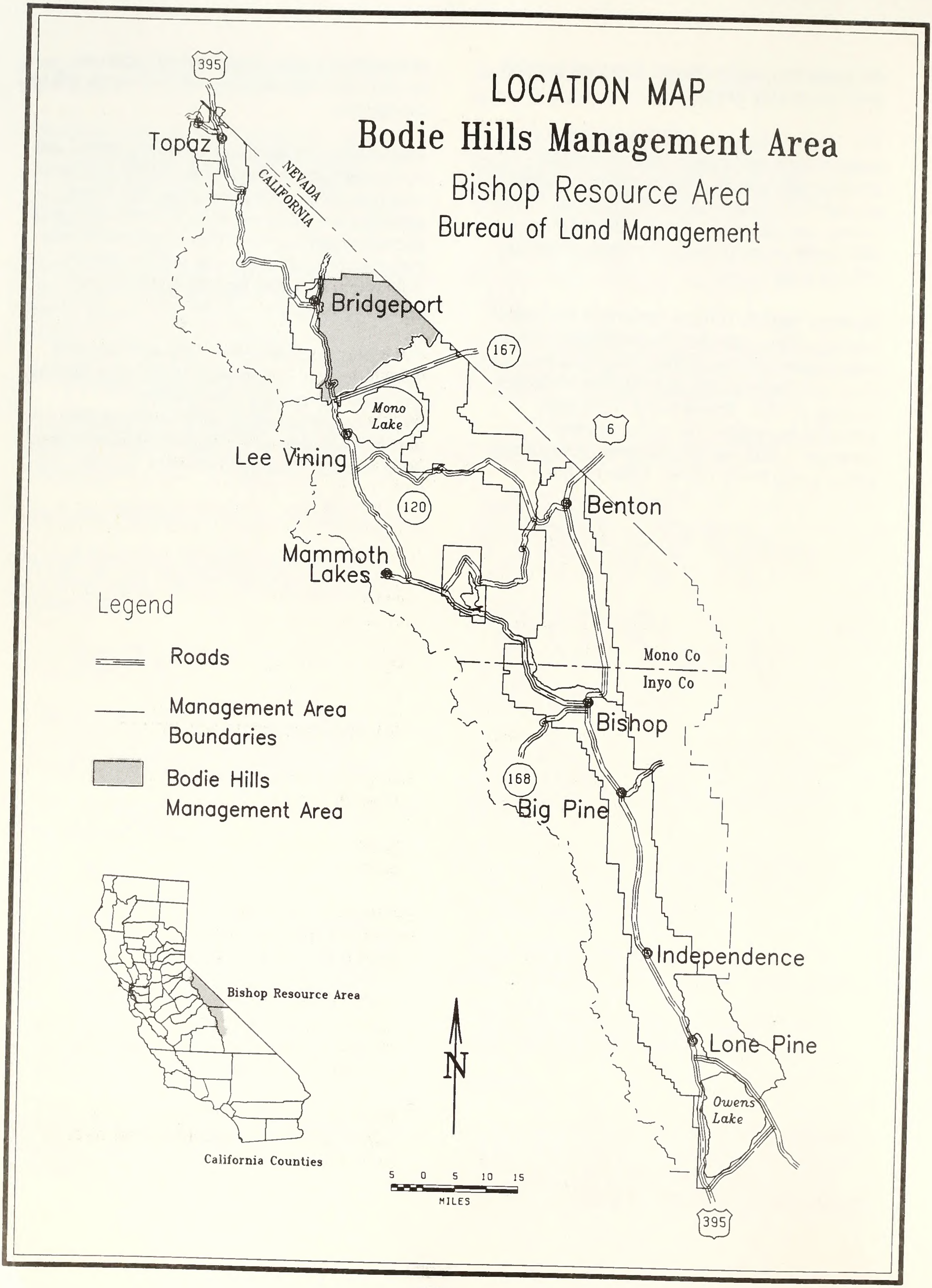
Spectacular scenery, important riparian habitat, and significant recreational and cultural values in the Bridgeport Management Area contrast with other important land uses such as mineral development, rights-of-way, livestock grazing and community needs.

The Conway Summit ACEC and VRM I classification will protect the spectacular scenery and enhance compatible uses such as dispersed recreation and camping. Rights-of-way can be routed east of U.S. Highway 395 along an existing transmission line in a VRM III area.

Riparian habitat, cultural resources and other values will be protected by locatable mineral withdrawals for Dog Creek, Virginia Creek, the Dogtown historic site, and the Travertine Hot Springs ACEC. These areas have high potential for mineral development and sensitive resources can be best protected by withdrawing these lands. Most of the management area would remain open to mining, and valid existing mineral rights will be recognized.

Geothermal exploration and development will be allowed in the Travertine Hot Springs area only if hydrologic studies show that these activities will not impact the thermal aquifer or surface water source. This requirement was included to protect special status species, geological features, and recreational and cultural values.

Providing land for community services and residential expansion near Bridgeport will help the local community. Recreation improvements such as interpretive facilities and access around Bridgeport Reservoir will help support increased tourism.



LOCATION MAP
Bodie Hills Management Area
Bishop Resource Area
Bureau of Land Management

Figure 2–7

Management Theme

Manage to protect historic and scenic values and to enhance wildlife habitat and recreation opportunities.

Decisions

Dispose of up to 80 acres to Bodie State Historic Park for patent of the existing Recreation and Public Purpose Act lease for the Bodie Cemetery.

Dispose of up to 2 acres near Bridgeport to provide for residential expansion and community services.

Acquire up to 5,725 acres of private land to protect wildlife, riparian, recreational and cultural values.

Enhance dispersed recreation opportunities such as off-highway vehicle touring, primitive camping, mountain biking, snowmobiling, hunting, fishing, cross-country skiing, sightseeing and environmental interpretation.

Designate Scenic Byways along Geiger Grade and State Highway 270 (Bodie Road) and a Backcountry Byway from Bodie State Historic Park to Aurora.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM II - Bodie Bowl and main travel corridors.
- VRM III - Remainder of the area.

Seasonal Protection and no snowmobile use in sage grouse wintering areas from 11/15 to 5/1.

Vehicle routes impacting sensitive plant habitats or areas where mule deer or sage grouse concentrate will be closed, seasonally closed or rerouted to improve and protect habitat.

Stabilize and restore selected stream reaches in Aurora Canyon, Hot Springs Canyon, Rough Creek and all tributaries, Atastra Creek, Cottonwood Creek, Bodie Creek, Clark Canyon, Rattlesnake Gulch and Clearwater Creek to improve riparian and aquatic habitat quality. Target specific improvements to:

- Improve channel water storage capacity to increase base flow.
- Reduce turbidity and sedimentation.
- Improve the aquatic environment to increase fish and invertebrate populations.
- Reduce water temperatures in summer to 60 degrees F or less.
- Provide habitat suitable for Lahontan cutthroat trout reintroduction.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 95 acres (50%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.
- Meet DPC goals on 470 acres (50%) of aspen to increase wildlife habitat diversity and reduce erosion.

- Meet DPC goals on 101 acres (50%) of wet meadows to increase habitat diversity and reduce erosion.

- Meet DPC goals on 26,915 acres (75%) of pinyon-juniper to increase wildlife habitat diversity and improve mule deer habitat.

- Meet DPC goals on 25,250 acres (50%) of sagebrush-bitterbrush to provide cover and forage for mule deer, pronghorn and sage grouse.

Designate 5,935 acres surrounding the town of Bodie as the Bodie Bowl Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to preserve the existing historical integrity of the Bodie National Historic Landmark and to protect scenic values. The following management prescriptions apply to actions occurring within the ACEC:

- No surface disturbing activities which may adversely affect the National Historic Landmark will be permitted until Limits of Acceptable Change are established in the ACEC management plan.

- No surface disturbing activities will be allowed to exceed the established Limits of Acceptable Change.

- Manage all activities to conform to VRM II standards (see Visual Standard Operating Procedures on page 1-16 and Appendix 4).

- Prohibit shooting in portions of the Bodie Bowl to protect historic structures and ensure public safety.

- Yearlong Protection of the ACEC. Target resources are historic and scenic values.

- Propose 1,500 acres near Bodie State Historic Park for withdrawal from locatable mineral entry. Establish Limits of Acceptable change specific to the withdrawal area in the ACEC management plan.

- Employ full fire suppression techniques against all wildfires.

Retain the Travertine Hot Springs ACEC (See Bridgeport Valley Management Area for ACEC goals and decisions).

Eliminate grazing on the Copper Mountain Allotment if the current permittee transfers or relinquishes his grazing privileges.

Allow commercial and non-commercial green fuelwood and Christmas tree harvesting to improve wildlife habitat or meet desired plant community goals. Dead wood (down only) may be collected for campfire use.

Support Needs

Prepare an activity plan for the Bodie Bowl ACEC that includes:

- Limits of Acceptable Change (LACs) for the entire Bodie Bowl ACEC. LACs may be developed through an EIS analyzing a Plan of Operations or separately as part of the ACEC management plan. An explanation of the LAC concept is provided in Appendix 5.

- A no shooting zone for the Bodie Bowl that considers historic values, public safety and hunting opportunities. Identification of the no shooting zone will be coordinated through the Coordinated Resource Management Planning process.

Coordinate and consult with the California State Historic Preservation Office and the Advisory Council on Historic Preservation for all activities which may affect the Bodie National Historic Landmark.

Develop an activity plan for recreational use in the management area. Incorporate an interpretive element to highlight wildlife, geologic and cultural values.

Coordinate Scenic Byway and Backcountry Byway designations with CalTrans, Toiyabe National Forest, Bodie State Historic Park and Mono County.

Identify and implement closure or seasonal closure of vehicle routes impacting sensitive plant habitats or areas where mule deer or sage grouse concentrate through the Coordinated Resource Management Planning process.

Develop a comprehensive Wildlife Habitat Management Plan for the Bridgeport Valley and Bodie Hills management areas.

Monitor water quality to determine the impacts of recreation, grazing and mining activities.

Coordinate with Mono County to reduce the adverse impacts of road maintenance.

Develop or revise Allotment Management Plans through the Coordinated Resource Management Planning (CRMP) process. Existing CRMPs will be revised to incorporate desired plant community and stream improvement goals.

Identify mineral material sources near Bridgeport and U.S. Highway 395.

Coordinate with CalTrans to relinquish and rehabilitate mineral material pits to meet viewshed objectives.

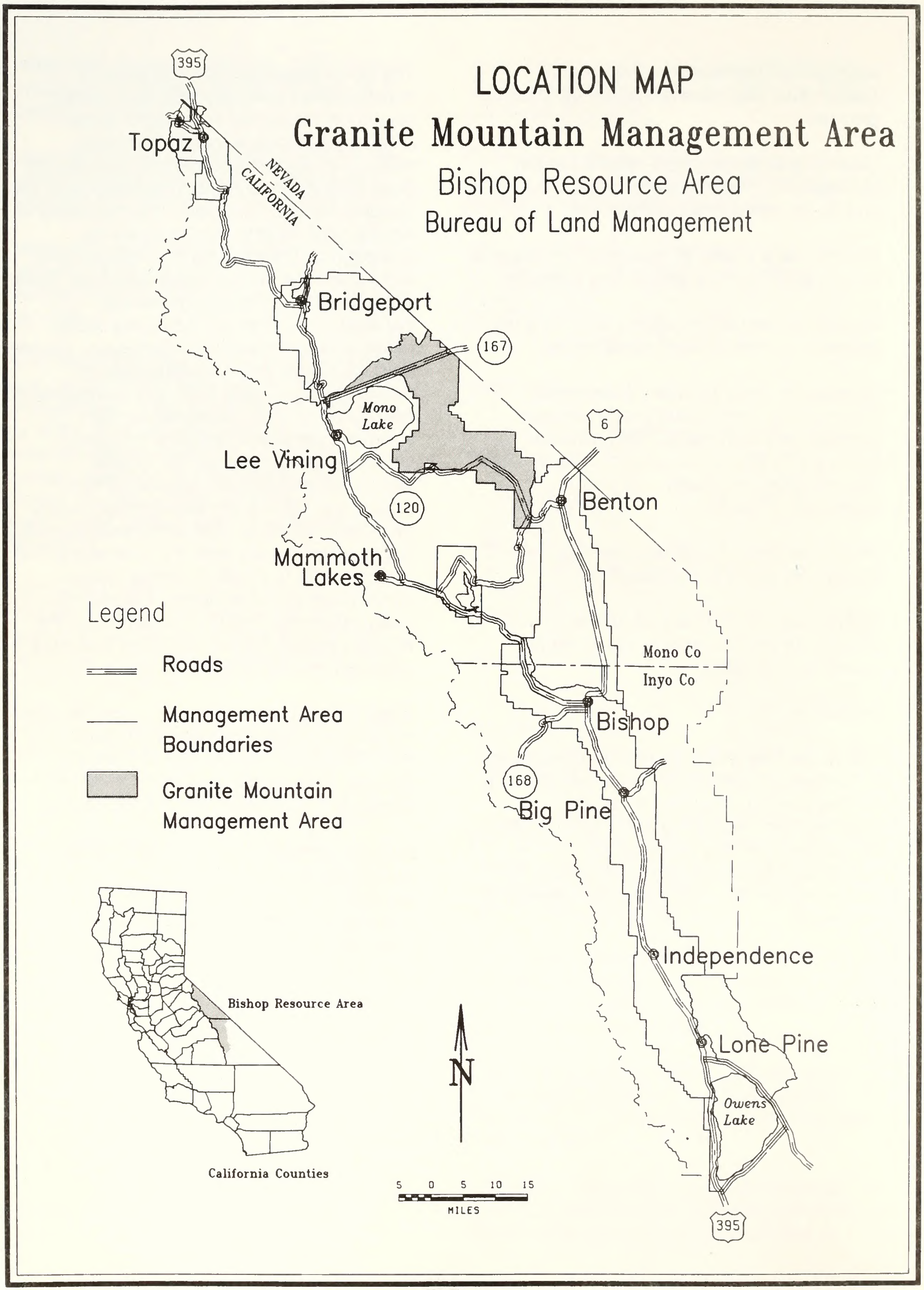
Rationale

The Bodie Hills Management Area has a large of number of high quality resources including wildlife, cultural resources, recreation opportunities, livestock grazing and minerals. These decisions are designed to accommodate a wide variety of uses, while protecting and improving sensitive areas and resources.

The Bodie Bowl has been the focus of considerable controversy due to potential impacts of mining on the town of Bodie. ACEC designation, a locatable mineral withdrawal, and other decisions affecting the Bowl were made to protect the integrity of the National Historic Landmark. The boundary of the National Historic Landmark will be proposed by the National Park Service and include the historic resources within the Bodie Bowl which they feel are of national significance. The ACEC boundary (5,935 acres) covers the zone of influence on historic and associated visual resources which deserve special recognition and management. As a result of ACEC designation, this nationally significant resource will receive additional recognition and all mineral exploration activities will require a Plan of Operations. This gives BLM greater control over these activities. The withdrawal boundary (1,500 acres) covers only the area where it is inconceivable to conduct mining related activities without unacceptable impacts to historical values. With the exception of the withdrawal area, the management area as a whole will remain open to mining.

Yearlong Protection restrictions, desired plant community goals, and acquisition proposals were established to maintain and restore streams, riparian areas, meadows, aspen groves and other important wildlife habitats.

Intensive recreation management will be implemented to decrease adverse impacts in sensitive areas and enhance recreation opportunities throughout the Bodie Hills Management Area.



LOCATION MAP

Granite Mountain Management Area

Bishop Resource Area

Bureau of Land Management

Figure 2–8

Management Theme

Protect and enhance wildlife habitat and scenic values. Provide opportunities for dispersed recreation while allowing mineral exploration and development.

Decisions

Dispose of up to 80 acres near Mono City for residential expansion and community services.

Acquire up to 1,120 acres of private land to enhance recreation opportunities and protect scenic values. Acquire lands or scenic easements where private development would degrade scenery and violate visual resource management objectives for Mono Basin.

Enhance semi-primitive nonmotorized and motorized dispersed recreation opportunities in the Mono Basin, Granite Mountain and Cowtrack Mountain areas. Developed facilities for recreational purposes will be kept to a minimum and designed for resource protection.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM II - Mono Basin and Granite Mountain.

- VRM III - Adobe Valley.

Enhance habitat for sage grouse, mule deer and pronghorn.

- Use selective removal of decadent vegetation to improve migratory habitat for the Mono Lake deer herd.

- Prohibit grazing in the Frazier Canyon Allotment.

Enhance waterfowl habitat at Larkin, Antelope, Black and Adobe Lakes.

- Acquire up to 3,515 acres of private wetland.

- Reestablish the Larkin Lake Allotment. Livestock grazing will only be authorized to maintain waterfowl habitat quality.

Protect raptor nesting and roosting sites in the Dry Creek and Granite Mountain areas.

- Yearlong Protection of the Jeffrey pine at Dry Creek.

Stabilize and restore Adobe Creek to improve habitat conditions for the existing brown trout population.

- Improve channel water storage capacity to increase base flow by 30%.

- Do not allow the streambank artificial soil alteration rating to exceed 20%.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 8 acres (75%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.

- Meet DPC goals on 100% of the area's wet meadows to increase habitat diversity and reduce erosion.

- Meet DPC goals on 25 acres (100%) of Jeffrey pine to maximize wildlife habitat diversity and ensure adequate forest regeneration.

- Meet DPC goals on 8,495 acres (50%) of pinyon-juniper to increase wildlife habitat diversity and improve mule deer habitat.

- Meet DPC goals on 8,570 acres (25%) of sagebrush-bitterbrush to provide cover and forage for mule deer, pronghorn and sage grouse.

Manage habitat for the Montgomery Pass wild horse herd in accordance with the Montgomery Pass Wild Horse Territory Coordinated Resource Management Plan.

Prohibit commercial timber harvesting of Jeffrey pine at Dry Creek. Allow commercial and non-commercial fuelwood harvesting of dead (down only) and live trees to improve wildlife habitat or meet desired plant community goals. Allow commercial and non-commercial Christmas tree harvesting of pinyon in Frazier Canyon to improve mule deer habitat.

Support Needs

Develop an interpretive plan highlighting historic, wildlife, scenic and geologic values. Focus efforts in the Mono Basin and Bodie travel corridors.

Develop water sources in the Mono Basin and Granite Mountain areas for sage grouse, mule deer and pronghorn.

Inventory sage grouse wintering areas and strutting grounds.

Coordinate with private landowners at Conway Ranch to retain current fishery and wildlife habitat on Wilson Creek.

Develop a cooperative management agreement with the California Department of Fish and Game to improve and protect wetland and aquatic habitat in Adobe Valley.

Fence the Larkin Lake Allotment along the California/Nevada border.

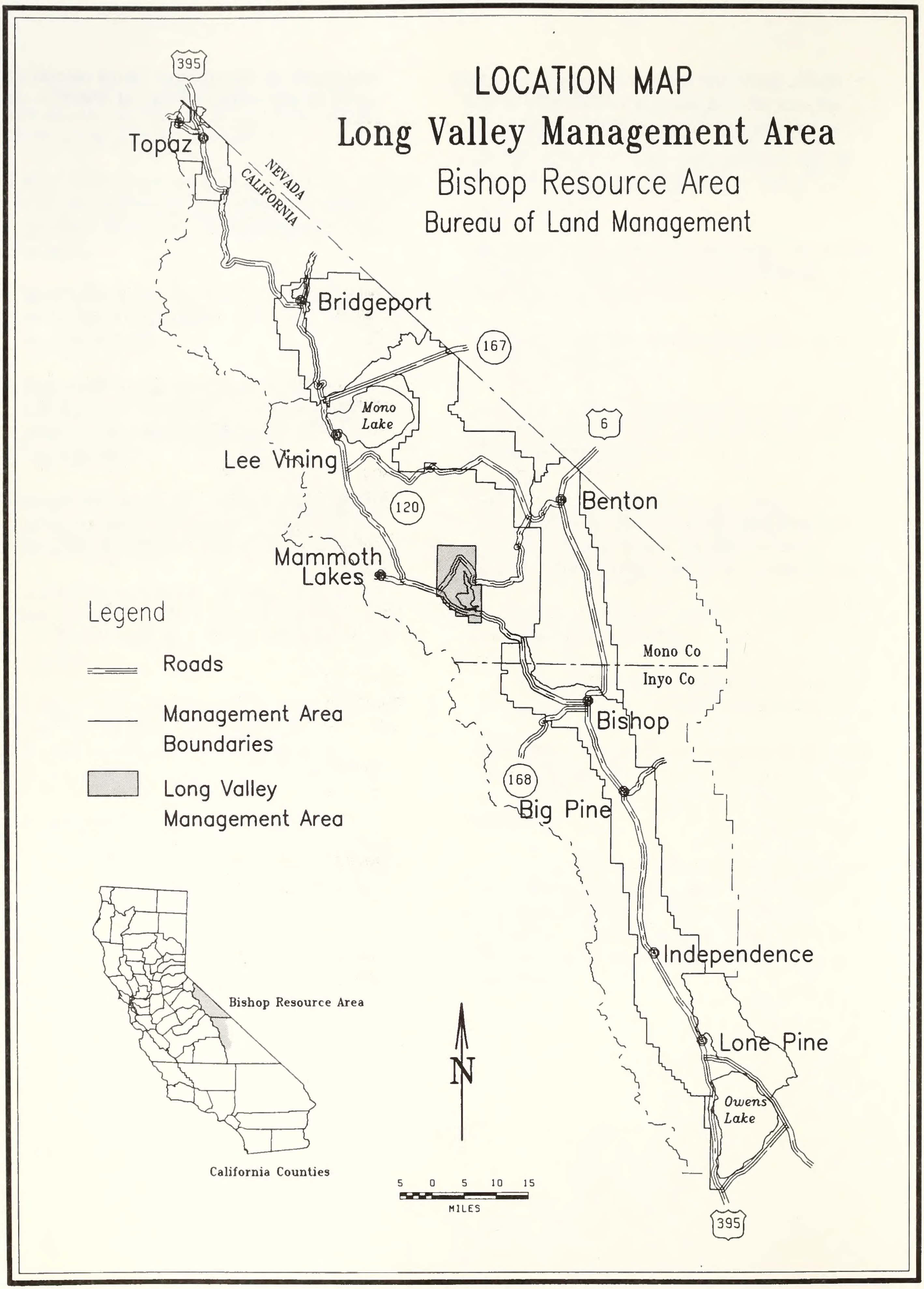
Fence the unnamed spring at Dutch Pete's and Indian Spring to prevent degradation.

Determine raptor nesting site protective zones and measures.

Rationale

The Granite Mountain Management Area has a number of significant resources including habitat for mule deer, sage grouse and pronghorn, and an important visual background for the Mono Basin National Scenic Area.

These decisions were selected because they will protect and improve wildlife habitat and watershed conditions, enhance recreation opportunities, and protect visual resources near the Mono Basin National Scenic Area.



LOCATION MAP
Long Valley Management Area
Bishop Resource Area
Bureau of Land Management

Figure 2–9

Management Theme

Enhance recreation opportunities through the improvement of facilities. Protect and enhance wildlife and scenic values.

Decisions

Land use authorizations within the Mammoth-June Lake Airport planning area will be consistent with safety mitigation specified in the airport plan. The airport plan restricts the height, lighting, and steam emissions from geothermal and other developments that would interfere with safe operation of the airport.

Provide for recreation opportunities such as mountain biking, off-highway vehicle touring, camping and interpretation of natural and geologic features.

Provide for recreational hot spring use while mitigating impacts to endangered, threatened and sensitive species, riparian areas and wet meadows.

Manage the entire area to conform to Visual Resource Management (VRM) II standards.

Protect crucial sage grouse and mule deer habitats with the following measures:

- Seasonal Protection and no snowmobile use in sage grouse wintering areas from 11/15 to 5/1.

- Manage livestock use to enhance meadow habitat for sage grouse on the Hot Creek and Wilfred Creek allotments.

- Acquire up to 475 acres of private land to protect sage grouse habitat.

- Yearlong Protection of the mule deer migration corridor.

- Acquire up to 80 acres of private land to protect the mule deer migration corridor.

Maintain or enhance habitat for endangered, threatened and candidate species, and other species of management concern.

- Yearlong Protection of Great Basin springsnail and Owens speckled dace habitats.

- Develop new habitats for Owens tui chub and Owens speckled dace.

- Acquire up to 10 acres of private land to protect Owens speckled dace, Great Basin springsnail and diving beetle habitats.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 35 acres (100%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.

- Meet DPC goals on 50% of the area's wet meadows to increase habitat diversity and reduce erosion.

- Meet DPC goals on 610 acres (75%) of Jeffrey pine to maximize wildlife habitat diversity and insure adequate forest regeneration.

- Meet DPC goals on 1,100 acres (25%) of sagebrush-bitterbrush to provide cover and forage for mule deer, pronghorn and sage grouse.

Allow commercial and non-commercial fuelwood harvesting of dead (down only) trees.

Support Needs

Prepare an activity plan for recreation management in the area. Include prescriptions for management of hot springs, interpretation of geologic and other natural features, consideration of mountain bike trails, and management of dispersed camping and other recreational activities.

Prepare a Habitat Management Plan for sage grouse in cooperation with the California Department of Fish and Game, Inyo National Forest, and City of Los Angeles Department of Water and Power.

Coordinate with Mono County to protect sage grouse habitat.

Prepare a Habitat Management Plan for the Round Valley deer winter range and migration corridor in cooperation with the California Department of Fish and Game, Inyo National Forest, and City of Los Angeles Department of Water and Power.

Construct ponds or related habitats for Owens tui chub and Owens speckled dace.

Coordinate with CalTrans to relinquish and rehabilitate selected mineral material pits.

Develop Allotment Management Plans for the Hot Creek and Wilfred Creek allotments.

Rationale

The Long Valley Management Area contains crucial habitats for mule deer, sage grouse, and other wildlife. There is tremendous potential to enhance recreation opportunities and increase visitor use. While the potential for geothermal development exists, unless there is a major change in the world energy situation, development of geothermal resources on Bureau land appears unlikely in the near future.

These decisions will protect the integrity of the mule deer migration corridor and sage grouse leks. The decisions were also selected to enhance recreation opportunities and reduce the impacts of recreation and other activities on sensitive wildlife species.

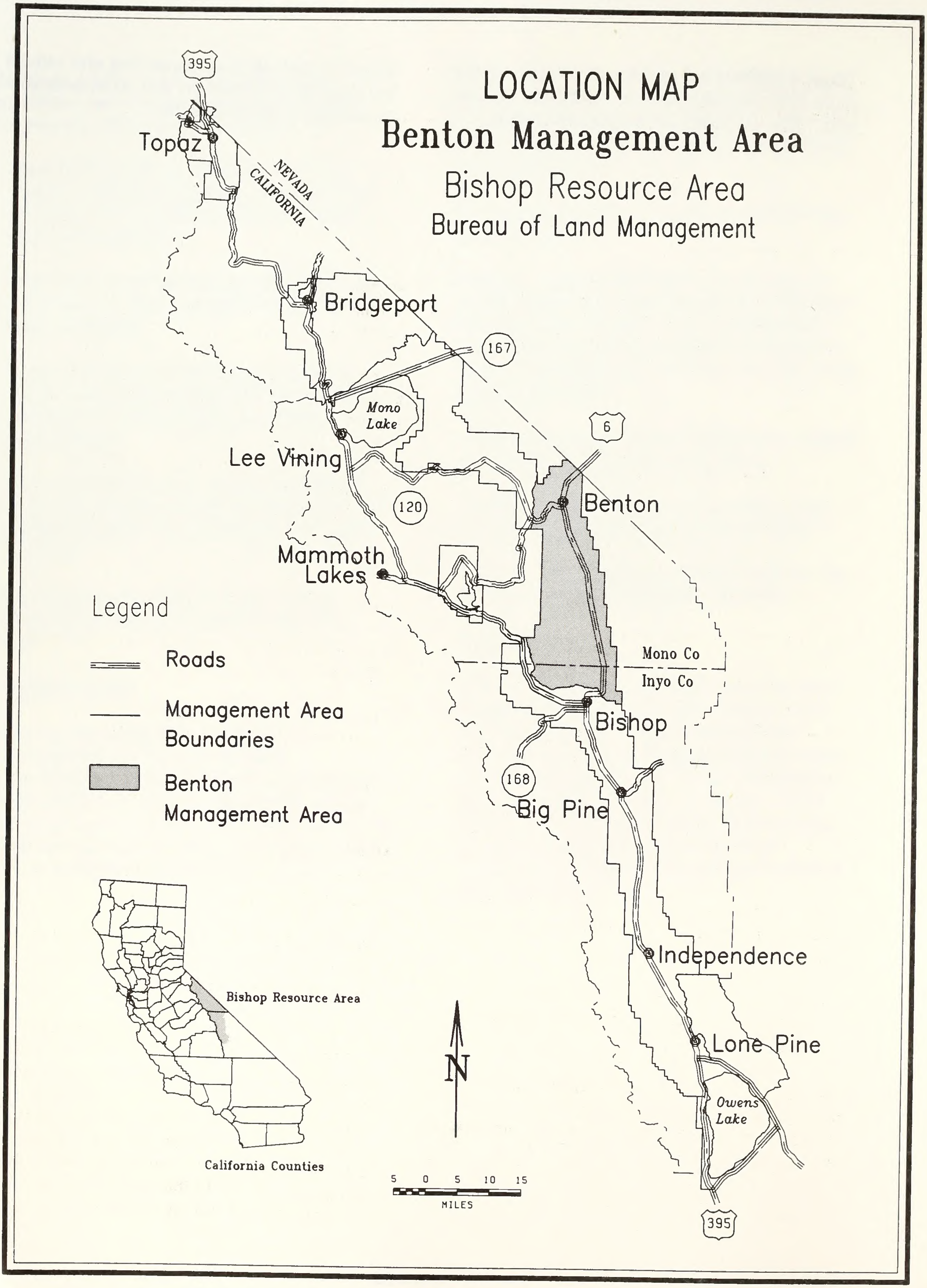

LOCATION MAP
Benton Management Area
Bishop Resource Area
Bureau of Land Management
395
Topaz
NEVADA
CALIFORNIA
Bridgeport
167
Mono Lake
Lee Vining
6
Benton
120
Mammoth Lakes
Mono Co
Inyo Co
Bishop
168
Big Pine
Independence
Lone Pine
Owens Lake
395
Legend
Roads
Management Area Boundaries
Benton Management Area
Bishop Resource Area
California Counties
N
5 0 5 10 15
MILES

Figure 2–10

Benton Management Area

Management Theme

Provide for a variety of dispersed recreation opportunities. Enhance scenic and wildlife resources while providing for land disposals along U.S. Highway 6.

Decisions

Dispose of up to 5,435 acres of Bureau land for agricultural use, residential expansion and community services.

Provide up to 200 acres adjacent to the Benton Indian Reservation for withdrawal to expand the reservation.

Enhance semi-primitive dispersed nonmotorized recreation opportunities in the south Tableland area. Provide opportunities for hiking, sightseeing and resource interpretation. Allow off-highway vehicle use in conformance with the High Desert Off-highway Vehicle Plan.

- Allow no new routes on the south Tableland except for those identified in the High Desert Off-highway Vehicle Plan.

- Prohibit mineral material sales on the south Tableland to protect scenic and recreational values.

- Acquire up to 640 acres on the south Tableland to protect scenic and recreational values.

Manage the northern Tableland and Blind Springs Hill areas for semi-primitive motorized recreation as per the High Desert Off-highway Vehicle Plan.

Manage the remainder of the area for semi-primitive nonmotorized and motorized recreation opportunities.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM II - South Tableland and alluvial fans of the White Mountains from Paiute Creek to the Nevada border.

- VRM IV - Blind Springs Hill.

- VRM III - Remainder of area.

Protect crucial sage grouse and mule deer habitats with the following measures:

- Seasonal Protection of sage grouse wintering areas from 12/1 to 5/1.

- Seasonal Protection of the Casa Diablo mule deer winter range from 11/1 to 4/30.

Maintain or enhance habitat for endangered, threatened and candidate species, and other species of management concern.

- Yearlong Protection of Owens speckled dace, Owens Valley vole and Great Basin springsnail habitats.

- Develop new habitats for Owens pupfish, Owens tui chub and Owens speckled dace along Marble Creek, at the unnamed spring in Section 21 near Millner Creek, at the unnamed spring in Section 23 near Paiute Creek, at the Hill Ranch in the N1/2 NE1/4 of section 5 near Lone Tree Creek and at the Devernois Ranch in the S1/2 SW1/4 of Section 20 near Willow Creek.

- Acquire up to 80 acres of private land near Marble Creek to protect Owens speckled dace habitat.

- Acquire up to 160 acres of private land at Willow Creek and the spring source north of Jeffrey Canyon for habitat protection and reintroduction of Owens pupfish and Owens speckled dace.

- Prohibit geothermal leasing and other activities affecting the aquifer of thermal water sources essential to any endangered, threatened or candidate species, or other species of management concern.

Stabilize and restore portions of Silver Creek and Marble Creek to improve riparian and aquatic habitat quality.

- Restore streambank stability and channel morphology.

- Improve riparian vegetation condition.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 20 acres (100%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.

- Meet DPC goals on 100% of the area's wet meadows to increase habitat diversity and reduce erosion.

- Meet DPC goals on 1,111 acres (25%) of pinyon-juniper to increase wildlife habitat diversity and improve mule deer habitat.

- Meet DPC goals on 5,859 acres (25%) of sagebrush-bitterbrush to provide cover and forage for mule deer and pronghorn. Manage the Volcanic Tableland Allotment to meet DPC goals for sagebrush-bitterbrush.

Retain the Fish Slough Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to protect endangered fish and sensitive plant habitats, wetlands, cultural properties, geologic features and scenic values. The following management prescriptions apply to actions occurring within the ACEC:

- Yearlong Protection of Zone 1 of the ACEC. Target resources are endangered fish and sensitive plant habitats, wetlands, cultural properties, geologic features and scenic values.

- Prohibit livestock grazing in the Fish Slough Allotment.

Allow commercial and non-commercial fuelwood harvesting to improve wildlife habitat or meet desired plant community goals.

Support Needs

Develop an interpretive program that highlights Fish Slough ACEC, pronghorn, geologic values on the Volcanic Tableland, and cultural values (Petroglyph Loop, Carson-Colorado Railroad and other historic values).

Rehabilitate abandoned mineral material sites on the south Tableland.

Develop a Habitat Management Plan for the Casa Diablo mule deer winter range in cooperation with the California Department of Fish and Game and Inyo National Forest.

Construct ponds or related habitats for Owens pupfish, Owens tui chub and Owens speckled dace.

Develop an Allotment Management Plan for the Marble Creek Allotment to improve mule deer winter range and meet the goals of the Casa Diablo Deer Herd Management Plan.

Rationale

These decisions were selected to handle the diverse demands in the Benton Management Area by setting aside some areas for protective management and providing other areas for intensive land use.

The proposed action makes several thousand acres available for community services, residential expansion, and agricultural use; and allows for intensive uses (such as mineral material sales) in portions of the management area.

Management decisions will protect scenery, and protect and enhance key wildlife habitat. They will also provide for a wide variety of dispersed semi-primitive recreation opportunities. The emphasis on semi-primitive non-motorized recreation management in the south Tableland is consistent with vehicle route designations recommended in the High Desert Off-Highway Vehicle Plan. The area's relatively few routes and semi-primitive values, and a strong interest in maintaining semi-primitive recreational activities in the area culminated in these final RMP prescriptions.

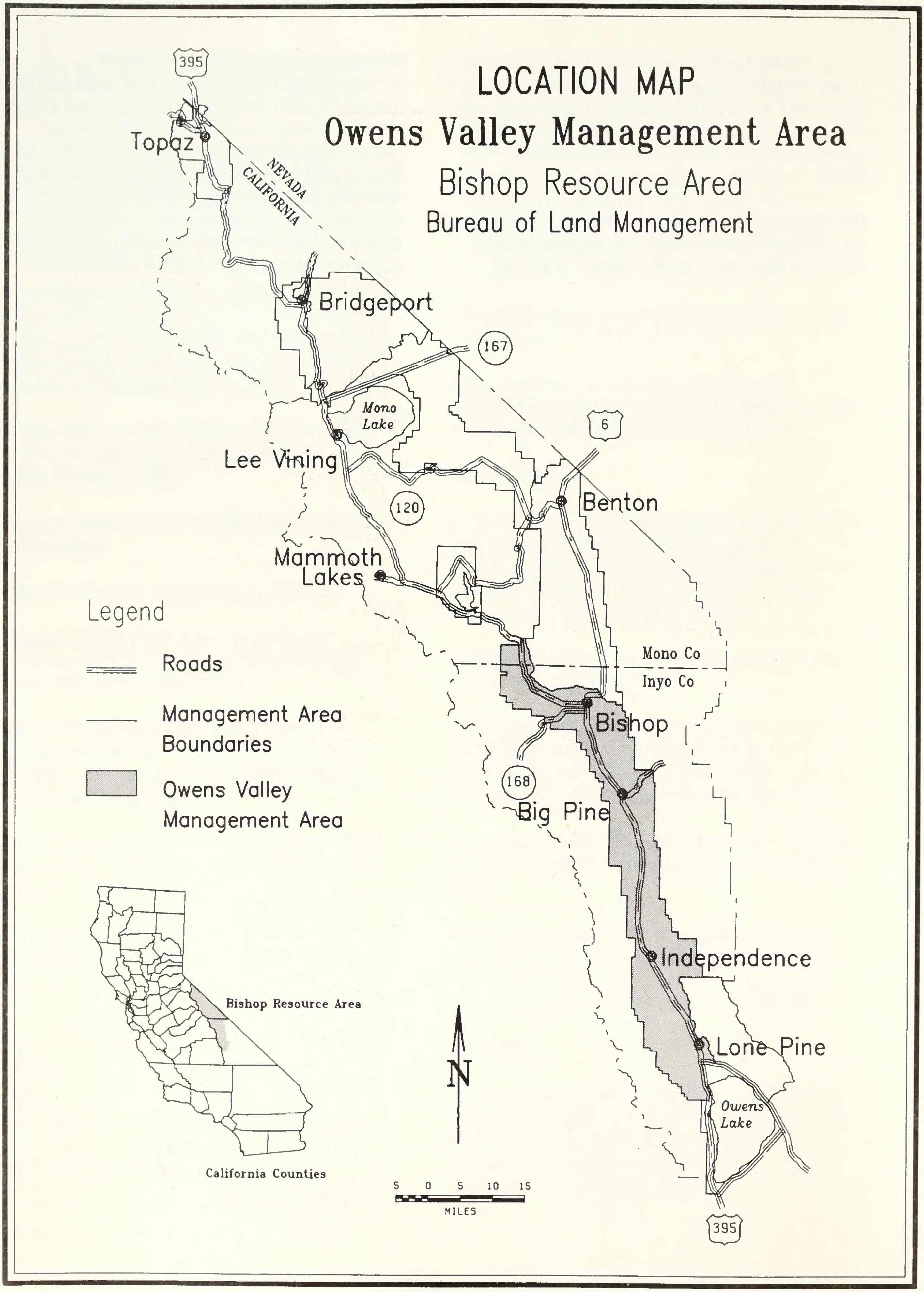

LOCATION MAP
Owens Valley Management Area
Bishop Resource Area
Bureau of Land Management
395
Topaz
NEVADA
CALIFORNIA
Bridgeport
167
Mono Lake
Lee Vining
6
Benton
120
Mammoth Lakes
Mono Co
Inyo Co
Bishop
168
Big Pine
Independence
Lone Pine
Owens Lake
395
Legend
Roads
Management Area Boundaries
Owens Valley Management Area
Bishop Resource Area
California Counties
N
5 0 5 10 15
MILES

Figure 2–11

Management Theme

Manage for the full spectrum of uses. Emphasize recreational use and environmental education while providing for land disposals.

Decisions

Dispose of up to 2,640 acres for agricultural use, residential expansion and community services.

Provide up to 200 acres adjacent to the Independence Indian Reservation for withdrawal to expand the reservation.

Acquire up to 1,106 acres of private land at Hogback Creek to protect riparian values.

Develop an environmental education center in Bishop.

Manage the Alabama Hills Special Recreation Management Area (SRMA) to enhance semi-primitive nonmotorized and roaded natural opportunities such as photography, mountain biking, hiking, four-wheel drive touring and horseback riding.

- Allow camping in designated areas only.

- Yearlong Protection of the Alabama Hills. Target resources are scenic values, geologic features and riparian habitats.

- Acquire up to 634 acres of private land to protect recreational and scenic values.

Manage the remainder of the area for semi-primitive nonmotorized and motorized recreation opportunities.

Designate Scenic Byways along Manzanar Road, Movie Flat Road and State Highway 168.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM II - Alabama Hills SRMA, Red Mountain and Crater Mountain.

- VRM IV - Poleta Canyon and Fish Springs Hill.

- VRM III - Remainder of the area.

Protect crucial mule deer and tule elk habitats with the following measures:

- Yearlong Protection of the Round Valley mule deer migration corridor.

- Seasonal Protection of the Round Valley, Goodale and Monache mule deer winter ranges from 11/1 to 4/30.

- Acquire up to 1,820 acres of private land to protect the Round Valley mule deer winter range and migration corridor.

- Prohibit grazing in the Sherwin, Round Valley, Keough, and Black Rock allotments.

- Eliminate grazing on the Wells Meadow allotment if the current operator transfers or relinquishes his grazing privileges.

- Maintain or enhance mule deer winter ranges to meet objectives of California Department of Fish and Game herd management plans.

- Manage deer winter ranges to provide at least 70% of the bitterbrush in mature or younger age classes, and to provide enough annual growth to support 5,400 deer on the Round Valley winter range, 4,000 deer on the Goodale winter range and 1,000 deer on the Monache winter range.

- Yearlong Protection of tule elk calving areas.

Maintain or enhance habitat for bald eagle, Pacific bigeared bat, Mount Lyell salamander, Owens Valley vole, ferruginous hawk and sensitive plants.

- Acquire up to 240 acres of private land at Lubkin Creek to protect Owens Valley vole, Great Basin springsnail and riparian habitats.

Maintain or enhance habitat for Owens pupfish, Owens tui chub, Great Basin springsnail and Owens speckled dace.

- Develop new habitats for Owens tui chub, Owens pupfish and Owens speckled dace.

- Yearlong Protection of Owens speckled dace and Great basin springsnail habitats.

- Acquire up to 160 acres of private land at Graham Ranch Spring to protect Great Basin springsnail habitat and reintroduce Owens pupfish.

Manage stream reaches in Horton Creek, Goodale and Tuttle Creek campgrounds to improve streambank stability and aquatic habitat quality.

- Remove campsites from riparian zones.

- Reinforce streambanks to prevent erosion.

Stabilize and restore selected stream reaches in Sawmill Creek, Symmes Creek, Taboose Creek, Goodale Creek, Independence Creek and Horton Creek to improve riparian and aquatic habitat quality and to preserve diverse wildlife and plant assemblages.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 115 acres (75%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.

- Meet DPC goals on 100% of the area's wet meadows to increase habitat diversity and reduce erosion.

- Meet DPC goals on 4,071 acres (25%) of sagebrush-bitterbrush to provide cover and forage for mule deer and tule elk.

Designate 5,735 acres as the Crater Mountain Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to protect scenic values, enhance recreation opportunities and provide for interpretation of geologic features.

- Acquire up to 140 acres of private land within the ACEC to protect recreational and scenic values.

Acquire the Manzanar historic site to protect and interpret historic values. Seek partnerships with Japanese Americans including the Manzanar Committee and the Japanese American Citizens League for protection and interpretation of the site.

Prohibit fuelwood harvesting.

Support Needs

Develop a visitor services program for the Alabama Hills to reduce vandalism and trash.

Develop an interpretive program to address wildlife, historic (Carson-Colorado Railroad), geologic (lava flows, Crater Mountain and Alabama Hills) and recreational values.

Coordinate mutual recreation interests with the City of Los Angeles Department of Water and Power and Inyo County.

Coordinate Scenic Byway designations with Inyo National Forest, CalTrans, Inyo County and the City of Los Angeles Department of Water and Power.

Prepare a Habitat Management Plan for the Round Valley mule deer winter range and migration corridor in cooperation with the California Department of Fish and Game, Inyo National Forest, and City of Los Angeles Department of Water and Power.

Develop a cooperative agreement with the City of Los Angeles Department of Water and Power to maintain and improve mule deer winter ranges.

Construct ponds or related habitats for Owens tui chub, Owens pupfish and Owens speckled dace.

Inventory riparian habitats for presence and abundance of the least Bell's vireo and yellow billed cuckoo. Evaluate riparian areas for habitat suitability for both species.

Develop an activity plan for the Crater Mountain ACEC.

Develop an activity plan for stabilization, restoration and interpretation of Manzanar.

Develop an Allotment Management Plan for the Alabama Hills Allotment.

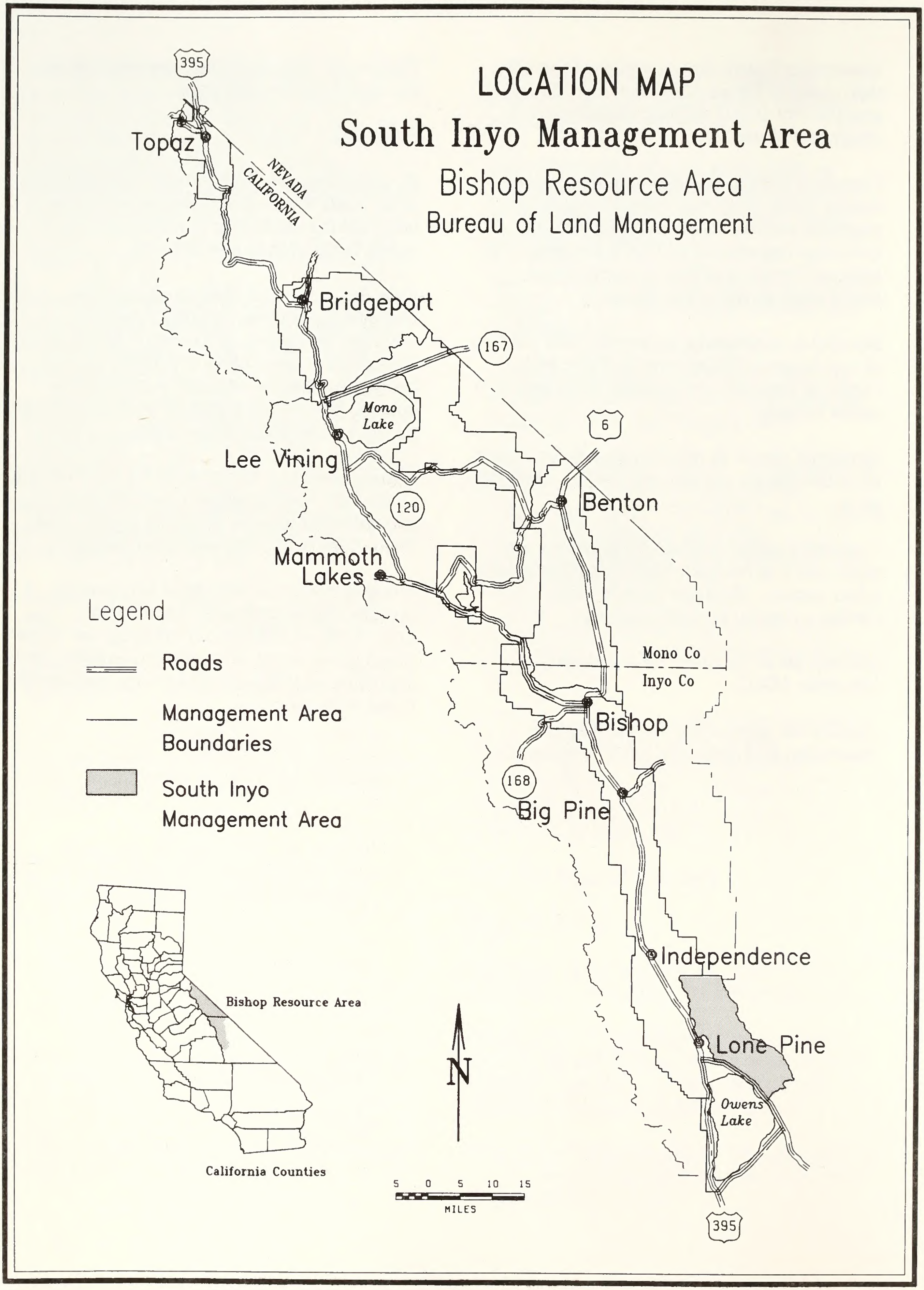
Rationale

By protecting key wildlife areas and providing other lands for development, these decisions will meet the conflicting demands placed on public lands in the Owens Valley.

Over 2,000 acres of Bureau land will be available for community service needs, agricultural use and residential expansion. This decision was made to provide an exchange base for acquisition of sensitive lands in the resource area so that there will be no net loss to the local tax base.

Several damaged streams will be restored and stabilized. Habitat will be protected and expanded for tule elk, mule deer, Owens tui chub, Owens pupfish, and other wildlife.

The environmental education center will provide visitors and local residents an opportunity to learn about the resource values of the public lands and proper use ethics, thus improving BLM's ability to manage and protect those resources.



LOCATION MAP
South Inyo Management Area
Bishop Resource Area
Bureau of Land Management

Figure 2–12

Management Theme

Manage to protect wilderness, wildlife, visual and cultural values and to enhance recreation opportunities.

Decisions

Dispose of up to 82 acres for agricultural use.

Acquire up to 7 acres of private land at Swansea to protect historic structures.

Manage for primitive recreation opportunities in the proposed Southern Inyo Wilderness Area. Provide for semi-primitive motorized and semi-primitive nonmotorized recreation opportunities in the remainder of the area.

- Manage the suitable portion of the Southern Inyo Wilderness Study Area as wilderness.
- Acquire easements for hiking access to the Long John Canyon, Pat Keyes, Union Wash and Forgotten Pass trails.
- Yearlong Protection of the proposed wilderness. Target resources include all wilderness values.

Designate Owenyo Road as a Scenic Byway.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM I - Proposed wilderness area.
- VRM II - The foothills of the Inyo Mountains and that portion of the Inyo Range south of Swansea.
- VRM III - Remainder of the area.

Maintain and enhance habitat for mule deer, bighorn sheep, California quail and mountain quail in the Inyo Mountains.

- Provide habitat suitable for the reintroduction of bighorn sheep between Mount Inyo and the Inyo National Forest boundary.
- Maintain or improve existing vegetative conditions.

Maintain habitat for Great Basin springsnail, Owens Valley vole and Pacific bigeared bat.

Seasonal Protection of prairie falcon nesting habitat in Long John Canyon from 4/1 to 6/30.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 3 acres (100%) of riparian habitat to increase wildlife habitat diversity and control erosion.
- Meet DPC goals on 1,200 acres (100%) of bristlecone pine-limber pine to preserve the existing plant assemblage.
- Meet DPC goals on 1,053 acres (75%) of dune habitat to maintain habitat for the Owens sand dune snout beetle.
- Meet DPC goals on 5,120 acres (25%) of pinyon-juniper to increase habitat diversity and improve mule deer habitat.
- Meet DPC goals on 219 acres (75%) of sagebrush-bitterbrush to provide cover and forage for mule deer.

Designate 2,220 acres that includes the 1,200 acres of bristlecone pine on the Inyo crest as the Keynot Peak Area of Critical Environmental Concern (ACEC). The goals of the ACEC are to protect the scientific and aesthetic values of the bristlecone pine-limber pine stands. The following management prescriptions apply to actions occurring within the ACEC:

- Yearlong Protection of the ACEC. Target resources are the bristlecone pine-limber pine plant communities.

- Allow the removal of wood under permit only. Permits will be issued only for research or museum purposes.

- Prohibit campfires.

- Manage the ACEC to meet wilderness guidelines.

Propose an 1/8 mile wide corridor along the Pat Keyes trail for withdrawal from locatable mineral exploration and development.

Prohibit geothermal exploration and development when it conflicts with habitat for endangered, threatened or candidate species, or other species of management concern.

Protect, stabilize and interpret the Salt Tram.

Prohibit livestock grazing to protect soils, vegetation, and wilderness and scenic values.

Allow commercial and non-commercial fuelwood harvesting outside of the proposed wilderness area to improve wildlife habitat or meet desired plant community goals.

Support Needs

Provide interpretive facilities at the Pat Keyes trailhead.

Develop an activity plan for the proposed Southern Inyo Wilderness Area immediately after designation.

Coordinate with Inyo County and the City of Los Angeles Department of Water and Power to designate Owenyo Road as a Scenic Byway.

Develop a Wildlife Habitat Management Plan for the entire area.

Develop water sources for mule deer, bighorn sheep and quail in the Inyo Mountains.

Rationale

The Southern Inyo Wilderness Study Area has been recommended as suitable for Wilderness designation in a decision separate from the RMP process.

The decision not to allow livestock grazing is carried through because there is not enough forage in this area for grazing to be practical.

Over 2,000 acres of Bureau land were considered for disposal for agricultural use under other alternatives. Only 82 acres are included in the proposed action because increased well pumping for agricultural use in this area could harm habitat for threatened species around Owens Lake.

Habitat for important species such as mule deer, bighorn sheep, quail, and the Great Basin springsnail will be maintained and enhanced.

A 1/8 mile corridor is proposed for withdrawal from mineral entry along the Pat Keyes trail to protect important recreation opportunities. A withdrawal was considered to protect visual resources and primitive recreation opportunities in the foothills of the Inyo

Mountains. This withdrawal has not been adopted because the small amount of mineral development anticipated will have minor impacts on those resources, while any mineral development would provide some benefit to the local economy.

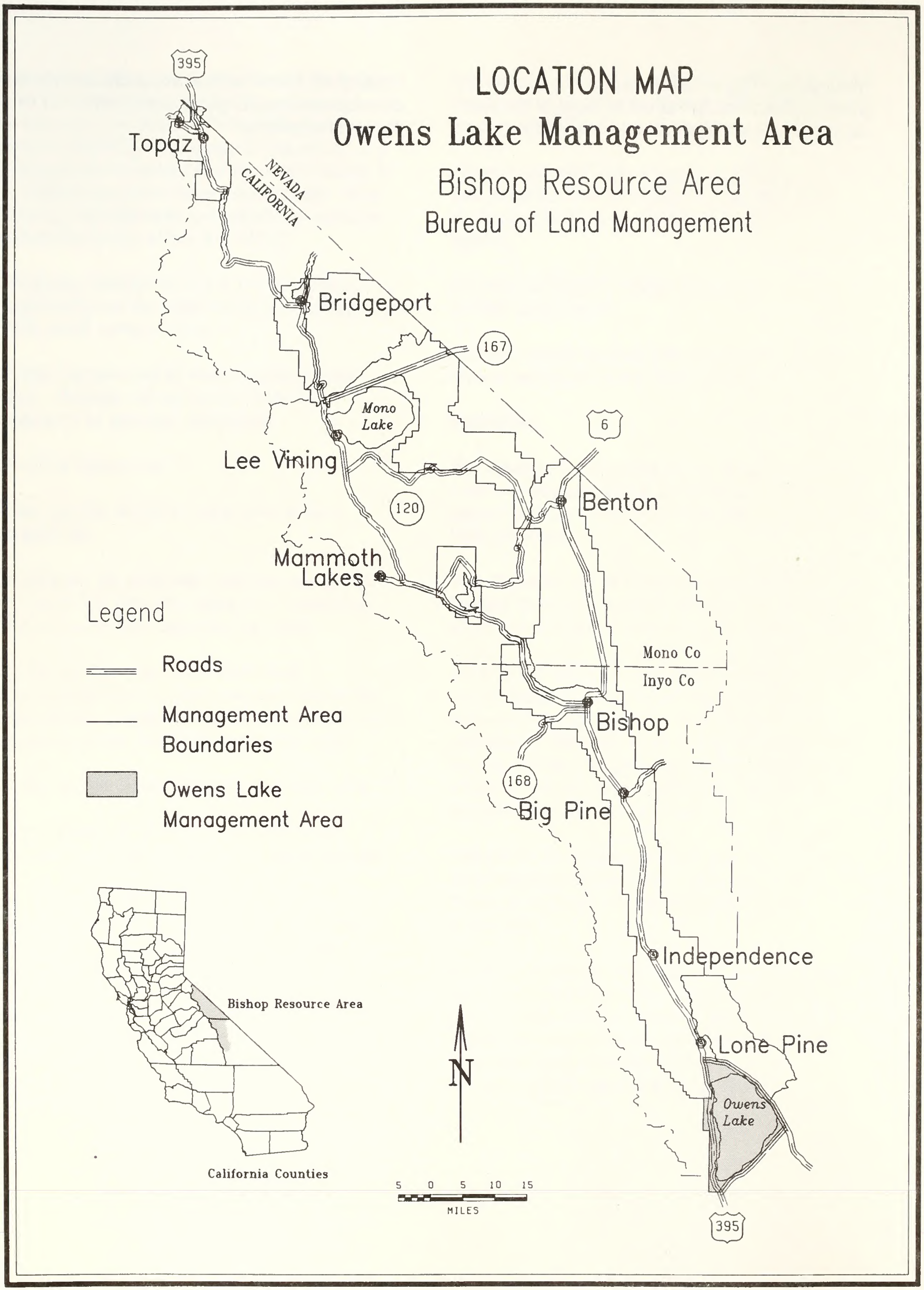

LOCATION MAP
Owens Lake Management Area
Bishop Resource Area
Bureau of Land Management

Figure 2–13

Owens Lake Management Area

Management Theme

Manage to protect and enhance wildlife habitat.

Decisions

Provide direction and financial support to the InterAgency Visitor Center.

Manage the area to conform to the following Visual Resource Management (VRM) standards:

- VRM III - East of Owens Lake.
- VRM IV - West of Owens Lake.

Maintain and enhance habitat for mule deer and tule elk.

- Yearlong Protection of tule elk calving areas.

Maintain and enhance habitat for Owens pupfish, Owens tui chub, western snowy plover, Owens Valley vole and Owens sand dune snout beetle.

- Acquire up to 160 acres of private land near Swansea to protect Owens sand dune snout beetle habitat.
- Acquire up to 424 acres of private land south of Owens Lake to protect western snowy plover habitat.

Improve trout habitat on Braley Creek, Cottonwood Creek and Cartago Creek.

Manage Ash Creek as a riparian comparison area.

Enhance wildlife habitat and watershed conditions with the following Desired Plant Community (DPC) prescriptions:

- Meet DPC goals on 7 acres (100%) of riparian habitat to increase wildlife habitat diversity, provide high quality fish habitat and control erosion.
- Meet DPC goals on 100% of the area's wet meadows to increase habitat diversity and reduce erosion.
- Meet DPC goals on 3,214 acres (75%) of dune habitat to maintain habitat for the Owens sand dune snout beetle.

Prohibit geothermal exploration and development when it conflicts with habitat for endangered, threatened and candidate species, or other species of management concern.

Incorporate dust abatement measures in all discretionary actions.

Prohibit fuelwood harvesting.

Support Needs

Expand the InterAgency Visitor Center to include a repository for scientific collections and interpretive displays.

Develop cooperative management agreements to enhance habitat of endangered and threatened species on private land.

Coordinate with the City of Los Angeles Department of Water and Power to provide trout habitat in Cottonwood Creek.

Fence Braley Creek, Cottonwood Creek and Cartago Creek to exclude livestock. Provide offstream water developments for livestock.

Maintain the livestock exclosure on Ash Creek.

Rationale

Much of the periphery of Owens Dry Lake provides habitat for threatened species and other wildlife. BLM acquisition is proposed for many of these locations so that habitat can be protected and enhanced.

Over 5,000 acres of Bureau land was considered for disposal for agricultural use. No disposals are included in these decisions because increased water pumping for agricultural use in this area could harm habitat for threatened species; and soil disturbance from agricultural use would increase dust problems.

East-West Transmission Line Corridor Alternatives

Four alternatives for the designation of an east-west transmission line corridor were considered. These include the No East-West Corridor Alternative, the Pizona Corridor Alternative, the Queen Valley Corridor Alternative and the Soldier Canyon Corridor Alternative. The locations of the three potential transmission line corridor areas are shown on Figure 3-12. Additional information about the corridor areas is shown on Figures 3-13 and 3-14.

No East-West Corridor Alternative

Under this alternative no east-west transmission line corridor area would be designated. No corridor for potential transmission lines into the Owens Valley would be established.

Pizona Corridor Alternative

Under this alternative the Pizona Corridor Area would be designated a transmission line corridor.

Queen Valley Corridor Alternative

Under this alternative the Queen Valley Corridor Area would be designated a transmission line corridor.

Soldier Canyon Corridor Alternative

Under this alternative the Soldier Canyon Corridor Area would be designated a transmission line corridor.

Proposed Action, Rationale and Conditions

Decision

No east-west transmission line corridor is established. Acceptance of future east-west transmission line applications will be limited to the Soldier Canyon area. If an application is received for this area, a site-specific environmental document will be prepared to address the potential impacts to resources within the Bishop Resource Area, Inyo National Forest, and BLM administered lands in the Ridgecrest and Tonopah Resource Areas. A decision would then be made whether to designate a corridor or not.

Rationale

The potential resource impacts and public concern are sufficient to rule out the possibility of allowing transmission line construction in the Pizona and Queen Valley study areas. While public concern is high, there is insufficient resource impact data available at this time to either designate or rule out the possibility of a corridor in the Soldier Canyon area. If we receive an application for a transmission line in the Soldier Canyon area, a complete environmental document will be prepared and a decision will be made based upon that document.

Conditions

An Environmental Impact Statement (EIS) will be required for any proposed transmission line. The first applicant for a project will be responsible for financing studies (part of the EIS) to determine the number of transmission lines a designated east-west corridor could support, and the mitigation that would be required.

Any transmission line within a designated east-west corridor will be subject to the following mitigation measures:

1. The EIS must include a visual analysis and surveys for cultural resources and sensitive plants. Appropriate mitigation to protect these resources will be developed based upon the results of these analyses.

2. All development must conform to Forest-wide Standards and Guidelines, Prescription Area and Management Area specific direction of the Inyo National Forest Land and Resource Management Plan.

3. All development must conform to Standard Operating Procedures, Area-wide and Management Area specific direction of the Bishop Resource Management Plan.

4. Road construction will not be permitted in Prescription Area 17 or other areas where road construction would have an unacceptable impact on sensitive resources such as mule deer or cultural resources.

5. Non-specular conductors and dull-toned towers will be required.

6. The Inyo National Forest landscape architect will participate in developing alternatives for the design and location of transmission lines. All feasible means of reducing visual impacts will be used, particularly at highway crossings.

7. Tower and line construction will adhere to BLM and Forest Service standards and guidelines for the prevention of raptor electrocution.

8. Construction will be authorized to occur at a time and in a manner as prescribed by the BLM and Forest Service to prevent displacement of elk, pronghorn and deer from crucial habitats.

9. Right-of-way clearing will be limited to the minimum needed to safely construct the line. Vegetation under the line that does not constitute a direct hazard will be left in place. All disturbed areas, cuts and fills will be restored and revegetated. Road widths will be limited to the minimum required for line maintenance.

10. The right-of-way will be maintained in conformance with the Power Line Fire Prevention Field Guide developed by the U.S. Forest Service, Bureau of Land Management and California Department of Forestry.

11. Use structures that are most suitable for a given site without requiring extensive site modifications, especially grading.

12. Colors for structures will be chosen after a thorough visual analysis. Colors may have to vary depending on site conditions.

13. Support facilities needed as part of the main system will be designed to limit their land disturbing impact.

14. Corridor width will be limited to 1/2 mile and will extend for 1/4 mile on both sides of the first transmission line constructed.

Comparative Summary of the Cumulative Impacts of the Alternatives

See Table 2-2 on the following pages.

Table 2-2. Cumulative Summary of the Impacts of the Alternatives.

	Alternative 1	Alternative 2
Visual Resources	Bureau decisions would generally cause visual resources to remain about the same on Bureau lands. Localized benefits would be outweighed by slight to moderate adverse impacts at site-specific areas. Some positive impacts would result from specific actions to improve visual resources. Cumulatively, multiple agency management of regional visual resources to maintain the area's scenery would be compatible and attainable.	Bureau decisions would generally cause visual resources to be adversely affected on Bureau lands. The major factor contributing to the decline would be designation of several management areas to less restrictive VRM classes. This would permit greater visual degradation on 156,000 acres designated as VRM class IV. Cumulatively, multiple agency management of regional visual resources to maintain the area's scenery would be least compatible and not attainable.
Recreation Opportunities	Bureau decisions would cause recreation opportunities to remain about the same with some local declines offsetting various benefits. Cumulatively, multiple agency management of regional recreation opportunities would be compatible with one another and increase primarily on National Forest lands where a proactive approach will be implemented.	Bureau decisions would cause recreation opportunities to remain about the same although moderate adverse impacts to various opportunities would occur in the resource area. Mitigation of resource conflicts would occur on a reactive basis with little proactive management emphasis. Cumulatively, recreation opportunities would increase primarily on National Forest lands where a proactive management approach will be implemented.
Sage Grouse and Quail	Bureau actions would be expected to contribute to a slow and persistent decline of sage grouse and quail habitat quality. Cumulatively, regional actions would be expected to contribute additionally to loss of habitat or habitat quality in sage grouse and quail areas.	Bureau actions would be expected to contribute significantly to the decline of sage grouse and quail habitat quality. Cumulatively, the continuing trend in regional land use would be expected to contribute to degrading and eliminating sage grouse and quail habitat.
Mule Deer	Actions on Bureau land would be expected to cause a slight to moderate decline in habitat quality and availability for six deer herds. Cumulatively, region-wide habitat conditions on migration corridors, holding areas and winter ranges would be expected to measurably decline.	Actions on Bureau land would be expected to cause a moderate to high decrease in habitat quality and availability for six deer herds. Cumulatively, region-wide habitat conditions on migration corridors, holding areas and winter ranges would be expected to undergo a severe decline.

Alternative 3	Alternative 4
Bureau decisions would generally cause visual resources to undergo moderate to high improvements on Bureau lands. Major factors contributing to the improvement are more restrictive VRM classes in portions of the resource area and wildlife habitat improvements. Cumulatively, a common region-wide management emphasis on visual resources by land use agencies to maintain or improve area scenery would be beneficial.	Bureau decisions will lead to a slight to moderate improvement of scenic values on Bureau land. An increase in VRM classes throughout scenic portions of the resource area contributes to the improvement. Cumulatively, a common region-wide management emphasis on visual resources by land use agencies to maintain or improve area scenery will be beneficial.
Bureau decisions would moderately to highly improve recreation opportunities and values throughout the resource area. The provision of visitor services, promotion of dispersed semi-primitive recreation uses, and improved management of scenic resources would increase visitation and user satisfaction more than alternatives 1 and 2. Cumulatively, region-wide recreation opportunities would increase from the multiple agency proactive management emphasis of visitor services, dispersed recreational uses, and recreation facilities development.	Bureau decisions will slightly to moderately improve recreation opportunities and values throughout much of the resource area. The Bureau's proactive management emphasis to improve and develop recreation opportunities will enhance visitors' recreation experience more than alternatives 1 and 2. Cumulatively, region-wide recreation opportunities will increase through provision of visitor services, promotion of dispersed recreation and recreation facilities development.
Bureau actions would be expected to cause measurable improvement in sage grouse and quail habitat quality. Cumulatively, region-wide actions would be expected to diminish overall sage grouse and quail habitat conditions, despite the positive measures on Bureau land.	Bureau actions will cause a slight improvement in sage grouse habitat quality while maintaining or causing a slight loss in quail habitat availability. Region-wide actions will slightly diminish sage grouse habitat conditions and compound quail habitat loss on Bureau lands.
Actions on Bureau land would be expected to substantially improve habitat conditions for five deer herds. Cumulatively, the region-wide habitat conditions for deer migratory corridors, holding areas, and winter ranges would be expected to undergo a slight to moderate decline.	Actions on Bureau land will improve habitat conditions for four deer herds. Cumulatively, the region-wide habitat conditions for deer migratory corridors, holding areas, and winter ranges will undergo a moderate decline.

Table 2-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Tule Elk	Bureau actions would be expected to cause a slight decline or maintain general habitat condition for elk while ensuring seasonal protection of all administered calving areas. Cumulatively, region-wide actions would be expected to cause a decline in forage quality and quantity, affecting general habitat conditions.	Bureau actions would be expected to cause a moderate decline in elk habitat condition. Significant adverse impacts to elk calving habitat would be expected from Bureau approved projects. Cumulatively, region-wide actions would be expected to cause a moderate negative impact on overall elk habitat condition.
Pronghorn	Bureau actions would be expected to cause a slight decline in overall habitat condition for pronghorn. Some areas, like Hammil Valley, could experience greater levels of habitat fragmentation and other forms of human disturbance than other locations. Cumulatively, region-wide actions would be expected to cause a slight decline in habitat quality.	Bureau actions would be expected to cause a moderate decline in overall habitat condition for pronghorn. Areas like Benton Valley and Hammil Valley could incur greater levels of habitat fragmentation and other forms of human disturbance than other areas. Cumulatively, region-wide actions would be expected to cause a moderate decline in habitat quality.
Riparian and Fisheries Habitat	Bureau actions would be expected to cause no change in overall riparian and fish habitat condition. Region-wide actions would be expected to cause a slight decline in general fish and riparian habitat condition.	Bureau actions would be expected to contribute significantly to a downward trend of riparian and fish habitat condition. Region-wide actions would be expected to cause a moderate decline in general fish and riparian habitat condition.
Special Status Species	Bureau actions would be expected to have a insignificant effect on habitat improvement for the majority of special status species. Substantial improvement in habitat quality and availability would be expected for the Owens pupfish, Owens tui chub and Lahontan cutthroat trout from Bureau activities. Region-wide actions would be expected to cause moderate to high negative impacts on the majority of special status species habitats resulting in additional species listed under the Federal Endangered Species Act.	Bureau actions would be expected to have an insignificant effect on habitat improvement for all, except one, special status species. Slight improvement in habitat quality and availability would be expected for the Lahontan cutthroat trout. Region-wide actions would be expected to cause moderate to high negative impacts on the majority of special status species habitats resulting in additional species listed under the Federal Endangered Species Act.

Alternative 3	Alternative 4
Bureau actions would be expected to cause a slight to moderate positive impact on elk habitat condition. Calving area habitat quality would be maintained except for possible locatable mineral exploration and development activity. Cumulatively, region-wide actions would be expected to cause a slight negative impact to overall elk habitat condition.	Bureau actions will improve habitat conditions and ensure calving area habitat quality is maintained. Cumulatively, region-wide actions will cause a slight negative impact to forage resources and general habitat condition.
Bureau actions would be expected to cause a moderate increase in overall habitat condition for pronghorn. Improved water distribution, desired plant community management and other actions could significantly improve pronghorn habitat quality. Cumulatively, region-wide actions would be expected to cause slight to moderate improvement in overall pronghorn habitat condition.	Bureau actions will have a significant positive impact on approximately one-half of the region's pronghorn habitat. Cumulatively, region-wide actions will have a slight to moderate positive impact on overall pronghorn habitat condition.
Bureau actions would significantly improve riparian and fish habitat condition. Region-wide negative impacts would be offset by substantial Bureau riparian and fish habitat improvements resulting in an overall slight positive impact.	Bureau actions will significantly improve riparian and fish habitat condition. Region-wide negative impacts will be offset by substantial Bureau riparian and fish habitat improvements resulting in an overall slight positive impact.
Bureau actions would be expected to have a substantial positive impact on habitat conditions for special status species. Removal from listing under the Federal Endangered Species Act would be expected to occur for the Owens pupfish, Owens tui chub and Lahontan cutthroat trout. Region-wide activities would be expected to continue causing slight to moderate impacts to habitat availability and quality despite Bureau progress with habitat recovery and protection.	Bureau actions will cause a slight improvement in special status species habitats. The Owens pupfish, Owens tui chub, and Lahontan cutthroat trout will be afforded the opportunity for down-listing or removal from formal listing under the Federal Endangered Species Act. Region-wide activities will continue causing slight to moderate negative impacts on the majority of special status plant and animal habitats in the eastern Sierra.

Table 2-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Vegetation	Bureau actions would be expected to have a slight negative impact on the vegetative condition of three plant communities (meadow, riparian and aspen). No significant changes would be expected to occur in the other six vegetation communities of special concern. Region-wide actions would be expected to cause a slight to moderate decline in the quantity and quality of old growth and mature forest types with little or no change in the overall areal extent and quality of the other vegetation types.	Bureau actions would be expected to have a slight negative impact on the vegetative condition for three plant communities (meadow, riparian and aspen). A complete harvest of the limited amount of old growth and mature forest types would be expected. Region-wide actions would be expected to cause a moderate decline in quantity and quality of old growth and mature forest types with little or no change in the overall areal extent and quality of the other vegetation types.
Locatable Minerals	Bureau decisions would include the withdrawal of 8,589 acres of high and moderate mineral Potential. This would have a moderate impact on development of minerals. VRM II areas and seasonal restrictions would increase costs and constraints of exploration and development. Cumulatively, Bureau actions would be more restrictive to regional mineral development than activities permitted on adjacent lands.	Bureau decisions would include the withdrawal of 5,757 acres of high and moderate mineral potential. This would have slight impact on development of minerals. Yearlong and VRM II restrictions would have slight impact affecting only 5% of the high mineral potential acreage. Cumulatively, region-wide impacts would depend on management decisions of adjacent property. The USFS and LADWP would be more restrictive in development compared to restrictions on Bureau Lands.
Salable Minerals	Bureau decisions resulting in economic and environmental restrictions would impact 40% of salable mineral deposits. A moderate impact to salable mineral use results from 28% of the resource placed under VRM I and VRM II restrictions. Cumulatively, region-wide conditions would cause slight to moderate negative impacts to salable mineral use.	Bureau decisions resulting in economic and environmental restrictions would impact 12% of salable mineral deposits. The low number of acres assigned to VRM I and VRM II restrictions would result in slight impacts to salable mineral use. Cumulatively, region-wide conditions would cause slight to moderate negative impacts to salable mineral use.

Alternative 3	Alternative 4
Bureau actions would be expected to have a substantial positive effect on the quality and abundance of plant and animal life in at least three plant communities (meadow, riparian and aspen). Vegetation conditions would also be maintained or improved in the other six communities. Region-wide actions would cause slight to moderate improvement in the quality and abundance of vegetation in the biologically diverse meadow, riparian and aspen communities. Little or no change would be expected in the areal extent and quality of other vegetation types.	Bureau actions will measurably improve the quality and abundance of plant and animal life in at least three plant communities (meadow, riparian and aspen). Vegetation conditions will also be maintained or improved in the other six plant communities. Region-wide actions will slightly improve the quality and abundance of vegetation in the biologically diverse meadow, riparian, and aspen vegetation types. Little to no change will occur in the areal extent and quality of the other vegetation types.
Bureau decisions would include the withdrawal of 19,635 acres of high and moderate mineral potential. This would moderately impact mineral development. Marginal deposits would be uneconomical to develop due to high acreages of yearlong, seasonal, and VRM I and II restrictions that would increase costs. Cumulatively, region-wide impacts would be less restrictive on adjacent lands. Due to Bureau decisions, a high negative impact to regional mineral development would occur.	Bureau decisions include the withdrawal of 7,403 acres of high and moderate mineral potential. This will slightly impact mineral development. Moderate impacts are created by VRM I and yearlong restrictions which will increase costs and constraints of exploration and development. Some mineral deposits will be uneconomical to develop. Cumulatively, region-wide impacts depend on management objectives of adjacent properties and the level of planned development. Due to Bureau decisions a moderate to severe negative impact to regional mineral development will occur.
Bureau decisions resulting in economic and environmental restrictions would impact 56% of salable mineral deposits. The high number of acres assigned to VRM I and VRM II restrictions would result in severe impacts to salable mineral use. More than one-half of the deposits would become uneconomic to mine. Cumulatively, region-wide conditions would cause high negative impacts to salable mineral use.	Bureau decisions resulting in environmental and economic restrictions will impact 54% of the deposits making them uneconomic to develop. Pumice and dimension stone deposits will be severely impacted in the Benton and Long Valley areas. Cumulatively, region-wide conditions will cause moderate negative impacts to salable mineral use.

Table 2-2. Cumulative Summary of the Impacts of the Alternatives (continued).

	Alternative 1	Alternative 2
Livestock Grazing	Actions on Bureau land would continue to improve rangeland conditions for livestock and other resources to a moderate degree. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to operators would be expected to cause little or no change in the regional livestock industry.	Actions on Bureau land would not result in improved rangeland conditions for livestock and other resources. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to the regional livestock industry would be the same as identified under alternative 1. Overall this would be the least impacting (negatively or positively) alternative on livestock operations.
Cultural Resources	Bureau decisions for cultural resource management would be weak in the areas of educational and interpretive efforts. Some protection is given to the Bodie area. Traditional lifeway values are considered in the Bureau decision making process. Communication would continue to improve with local Indian communities. Region-wide there would be continued loss of cultural properties from vandalism and projects which could not be redesigned. Data retrieval would mitigate some of the losses.	Bureau decisions for cultural resource management would result in a program much less effective than it is now, especially in interpretive and data retrieval efforts. Existing protection would continue in the Bodie area. Traditional lifeway values would continue to be considered in the Bureau decision making process. Region-wide, there would be continued loss of cultural properties from vandalism and projects which would not be redesigned. There would be little or no data retrieval at threatened sites on Bureau lands, resulting in loss of a greater amount of information than under the other alternatives.

Alternative 3	Alternative 4
Actions on Bureau land would result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater longterm benefits to operators than any other alternative. The greatest amount of rangeland improvement would be realized under this alternative. However, this alternative would create moderate to high negative short-term impacts due to increased costs of conducting operations. Potential impacts on a regional basis would be moderate.	Actions on Bureau land will result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater longterm benefits to operators than alternatives 1 or 2. Benefits will be slightly less than under alternative 3. A great amount of rangeland improvement will be realized. However, this alternative will create moderate to high negative short-term impacts due to increased costs of operations. Impacts on a regional basis will be slight to moderate.
Bureau decisions for cultural resource management would result in a program improved over the existing situation through educational and interpretive efforts. Protection of the Bodie area would improve through mineral withdrawal, ACEC designation and development of limits of acceptable change. Traditional lifeway values would continue to be considered in the Bureau decision making process. Region-wide, there would be continued slow loss of cultural properties from vandalism and projects which could not be redesigned. However, the loss from vandalism would be expected to decrease as people became better informed. Data retrieval at threatened sites would mitigate many of the potential losses.	Bureau decisions for cultural resource management will result in a program improved over the existing situation through educational and interpretive efforts. Protection of the Bodie area will improve through mineral withdrawal, ACEC designation and development of limits of acceptable change. Attention to concerns of the local Indian community and benefits to their traditional lifeways will improve slightly. Region-wide, there will be continued slow loss of cultural properties form vandalism and projects which cannot be redesigned. However, the loss from vandalism will decrease as people become better informed. Data retrieval at threatened sites will mitigate many of the potential losses.

Table 2-2. Cumulative Impact Summary of the Alternatives (continued).

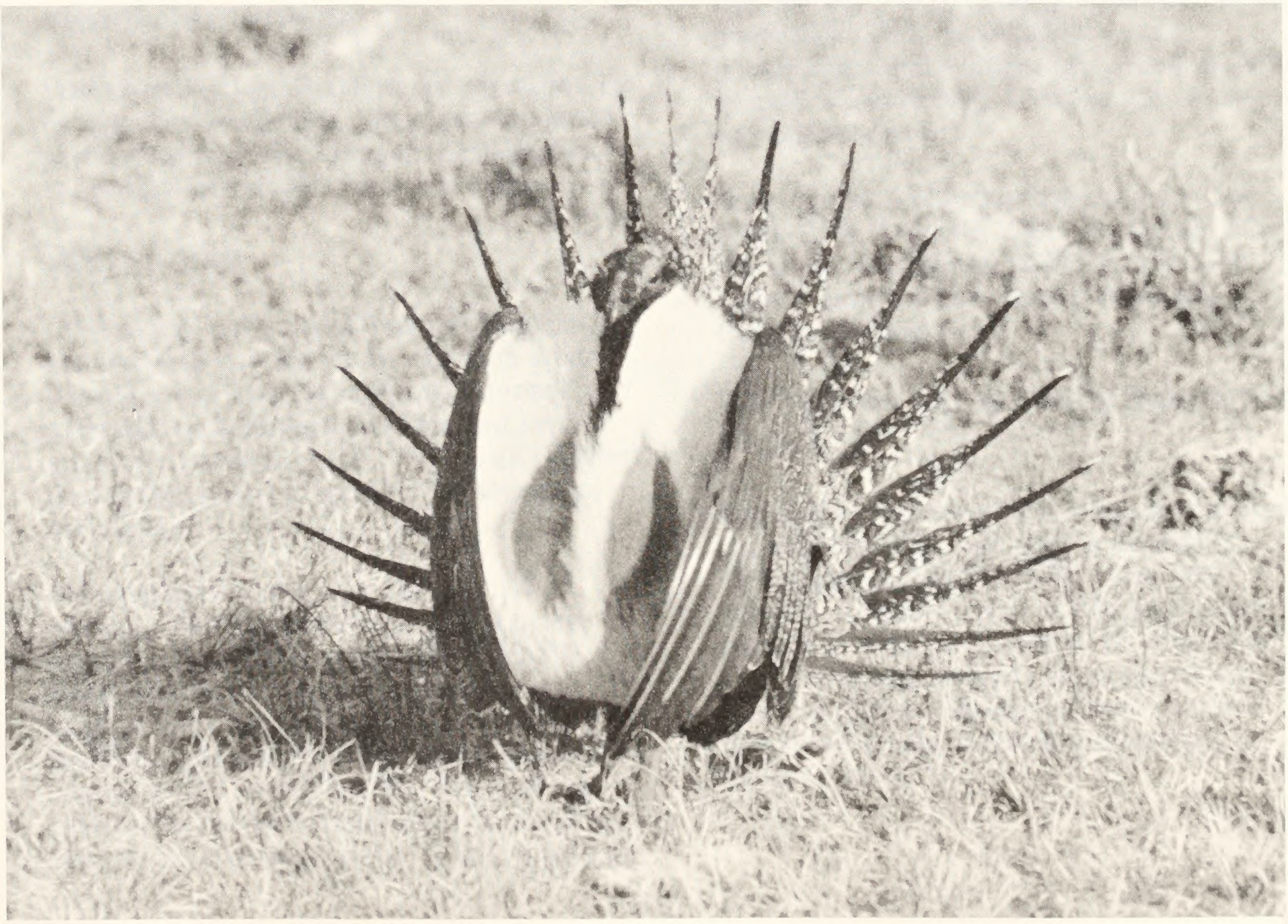
Transmission Line Corridor Alternatives Impact Comparison

No Action	Pizona	Queen Valley
Additional demand for electricity in southern California would have to be met using existing transmission line corridors or corridors outside of the Owens Valley. System reliability would be less than under the other alternatives and could result in major power outages in the event of a large natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains would remain intact. There would be no cumulative impacts.	A small but unknown number of deer and pronghorn would be lost. Visual quality objectives would not be met at the Highway 6 crossing near Montgomery Pass. There would be significant negative impacts to the area's natural and undisturbed character and the associated experiences of recreationists. Approximately 25 residents plus the users of a hotel/casino would have increased prolonged exposure to electro-magnetic fields (EMF). It is not known if this exposure together with the cumulative effect of multiple exposures from home and job appliances would constitute a health risk for these people.	A small but unknown number of deer would be lost. Visual resources would be seriously degraded; VQO and VRM standards would not be met. There would be an insignificant increase in prolonged human exposure to electro-magnetic fields (EMF). The cumulative effect from multiple exposures would be the same as described for the Pizona area.

Soldier Canyon	Proposed Action
A small but unknown number of elk calves would be lost. Up to four raptorial birds, including bald eagle and golden eagle, could be killed every 10 years. Visual impacts in the corridor area would be minimal, except where the corridor crosses the Waucoba Road. There would be significant negative impacts to the recreational values attached to the natural undisturbed character of the area. There would be no significant increase in prolonged human exposure to electro-magnetic fields (EMF). The cumulative effect from multiple exposures would be the same as described for the Pizona area.	The potential for a corridor designation in the Soldier Canyon area remains; but, additional demand for electrical power in southern California will have to be met using existing transmission line corridors or corridors outside the Owens Valley until an in-depth study of any potential corridor could be completed. System reliability will potentially be less and could result in major power outages in the event of a large natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains will remain intact for now.

Chapter 3

Affected Environment



Sage Grouse in Long Valley.

Chapter 3
Affected Environment

Introduction

This chapter provides a brief description of key resources in the Bishop Resource Area. Refer to Chapter 3 of the draft RMP/EIS for a detailed description of these resources and their existing conditions. Corrections and additions to Chapter 3 of the draft are presented in Appendix 6 (Errata). The description of resources in the East-West Transmission Line Corridor Alternative Areas is presented in its entirety. Resources described are those likely to be affected by implementation of the proposed action.

Recreation

Visual Resources

Visitors to the eastern Sierra are impressed by its magnificent scenery. Visual resources are particularly important along major highways, secondary roads, and visitor use areas.

Vehicle Use

Off-highway vehicle (OHV) use opportunities are available throughout the resource area. Vehicle use is limited to designated roads and trails with an emphasis on dispersed semi-primitive motorized travel. The Poleta Canyon area (1,300 acres) is open for cross-country vehicle use.

The Interagency and High Desert OHV studies - joint Forest Service, Los Angeles Department of Water and Power (LADWP), and BLM projects - are currently developing specific route designations for all lands in the resource area south of Pole Line Road (State Highway 167). Additional OHV studies are planned for the remainder of the resource area over the next several years. These studies will be compatible with the RMP's overall direction for OHV management and will provide on-the-ground implementation actions based on maintenance or enhancement of semi-primitive environments.

Snowmobiling occurs in the Bridgeport Valley, Bodie Hills, Long Valley, and Coleville management areas. Around Crowley Lake and north of State Highway 89 near Topaz, this activity is limited to designated roads and trails. All other areas are currently open to snowmobiling.

Recreation Opportunities

The Bishop Resource Area provides a wide array of recreation opportunities. The most popular activities include off-highway vehicle use, fishing, hiking, hunting, mountain biking, horseback riding, windsurfing, nature photography and sightseeing. Winter activities include snowmobiling, cross-country skiing, and snowshoeing.

Concentrated recreation use occurs in the Bodie Bowl, Alabama Hills, Fish Slough ACEC, Travertine Hot Springs ACEC, four Bureau Campgrounds, and the Long Valley and Conway Summit areas.

Recreation Opportunity Spectrum (ROS)

Recreation opportunities in the resource area are classified according to the Recreation Opportunity Spectrum (ROS). The ROS provides a framework to stratify and define classes of outdoor recreation environments. Most physical settings in the resource area fall into one of three categories: semi-primitive nonmotorized, semi-primitive motorized, or roaded natural.

Wildlife

Sage Grouse and Quail

Sage grouse are sparse but widely distributed over the northern region of the resource area. Inventories for this species have identified 42 strutting grounds (leks), 94,500 acres of nesting and brood-rearing habitat, and 17,000 acres of wintering habitat (Figure 3-1).

Both California quail and mountain quail occur in the resource area. California quail are found in greatest numbers in the Owens Valley and Coleville management areas. Mountain quail populations are restricted to a few locations in the Coleville, Bodie Hills, Bridgeport Valley, and South Inyo management areas.

Mule Deer

Mule deer are widely distributed throughout the Bishop Resource Area and are managed by the California Department of Fish and Game (CDF&G) as nine individual herd units. The Bureau of Land Management is a signatory cooperator on herd management plans, and works closely with CDF&G to manage deer habitat. Key habitats include winter ranges, migration corridors, holding areas, and fawning areas (Figures 3-2 and 3-3). See Appendix 6 for a discussion of winter range conditions not presented in the draft.

Tule Elk

Tule elk are distributed throughout the Owens Valley in 6 recognized herd areas. These herds are cooperatively managed by the BLM, California Department of Fish and Game (CDF&G), and Los Angeles Department of Water and Power (LADWP) through the Tule Elk Management Plan. Habitats most affected by Bureau management are localized calving areas (Figure 3-4).

Pronghorn

Three pronghorn populations are found in the resource area. These include the Bodie Hills, Hammil Valley, and Benton-Queen Valley populations (Figure 3-5). Key habitats include winter range, fawning areas, and breeding territories.

Threatened and Endangered Species

Threatened and endangered species found in the resource area include Owens pupfish (*Cyprinodon radiosus*), Owens tui chub (*Gila bicolor synderi*), bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco perigrinus anatum*), and Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*).

Candidate Species

Twelve animals classified as candidates for threatened or endangered species status by the U.S. Fish and Wildlife Service are found in the resource area. These species include 2 insects, 2 amphibians, 2 birds, and 6 mammals. See Appendix 6 for a discussion of candidate species habitat conditions not presented in the draft.

Other Species of Management Concern

Other species of management concern are pine marten, goshawk, blue grouse, Nelson bighorn sheep, black bear, prairie falcon, Owens speckled dace, and Great Basin springsnail (*Pyrgulopsis* sp. and *Tryonia protea*).

Aquatic and Fisheries Habitat

Surface water is present throughout the resource area in the form of streams, springs, and small lakes or ponds. There are 69 streams with 146 miles of riparian/aquatic habitat within the resource area. A total of 325 springs have been identified. Streams,

SAGE GROUSE HABITAT

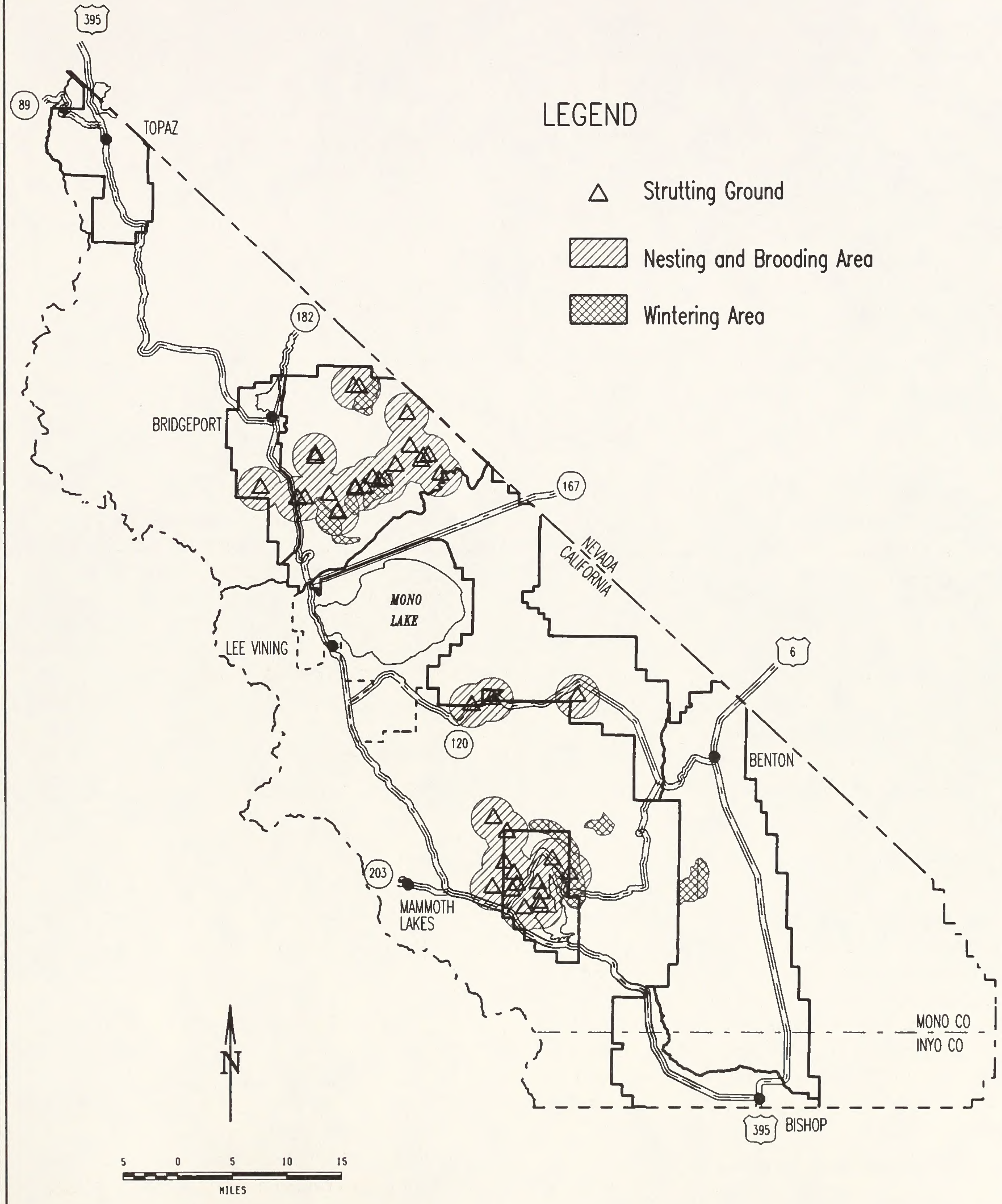


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Figure 3–1

KEY MULE DEER HABITAT

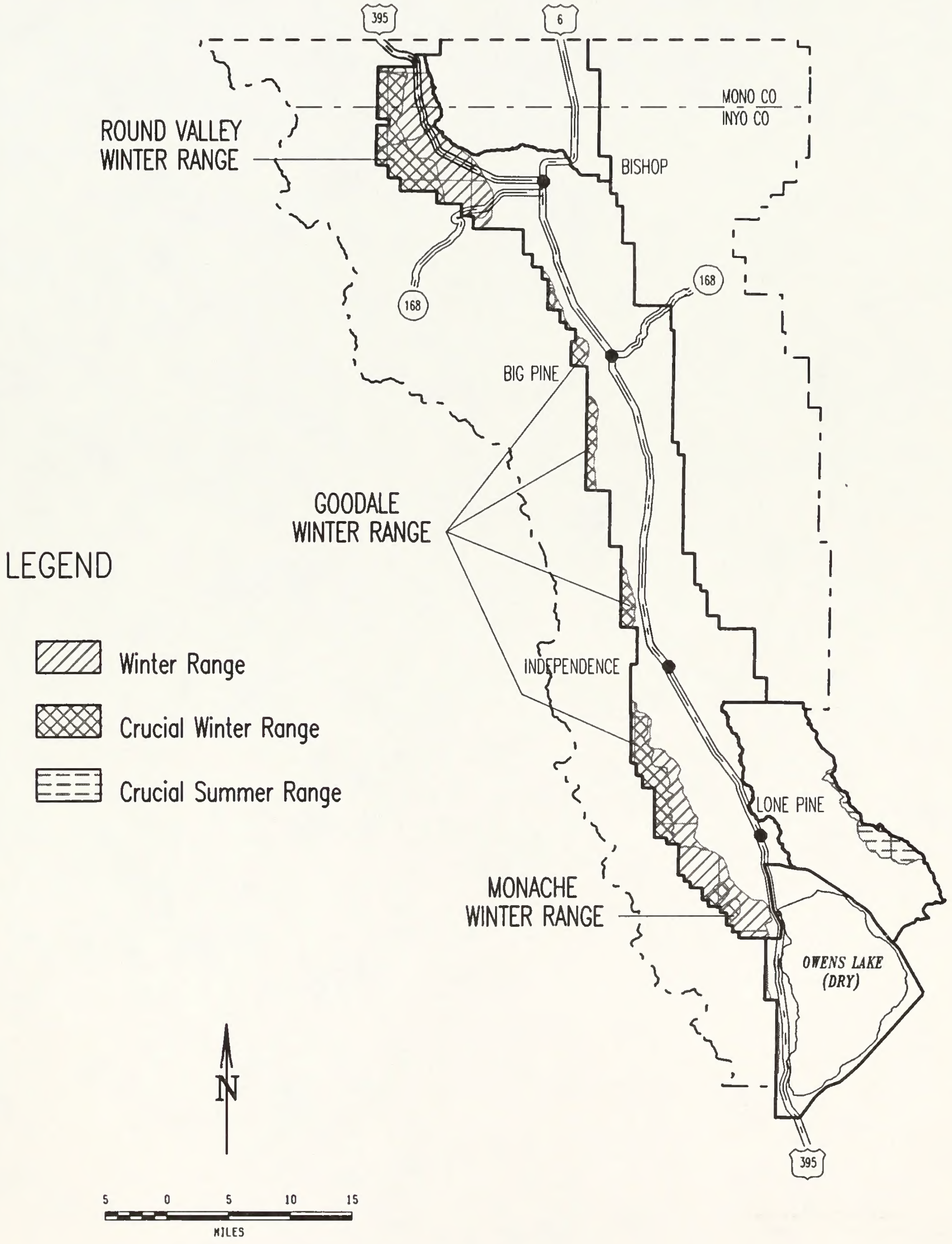

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Figure 3–2

KEY MULE DEER HABITAT

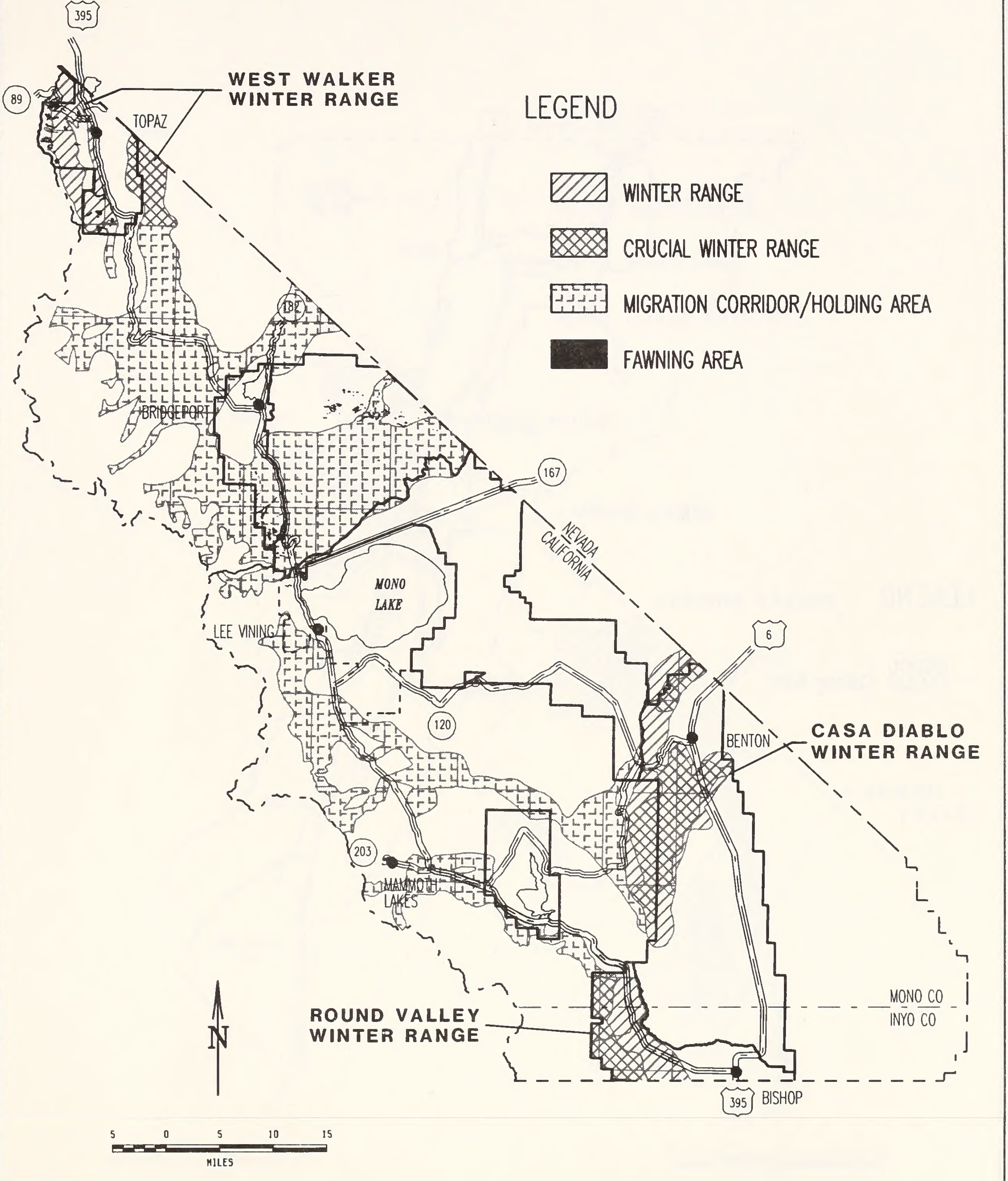

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Figure 3–3

TULE ELK CALVING AREAS

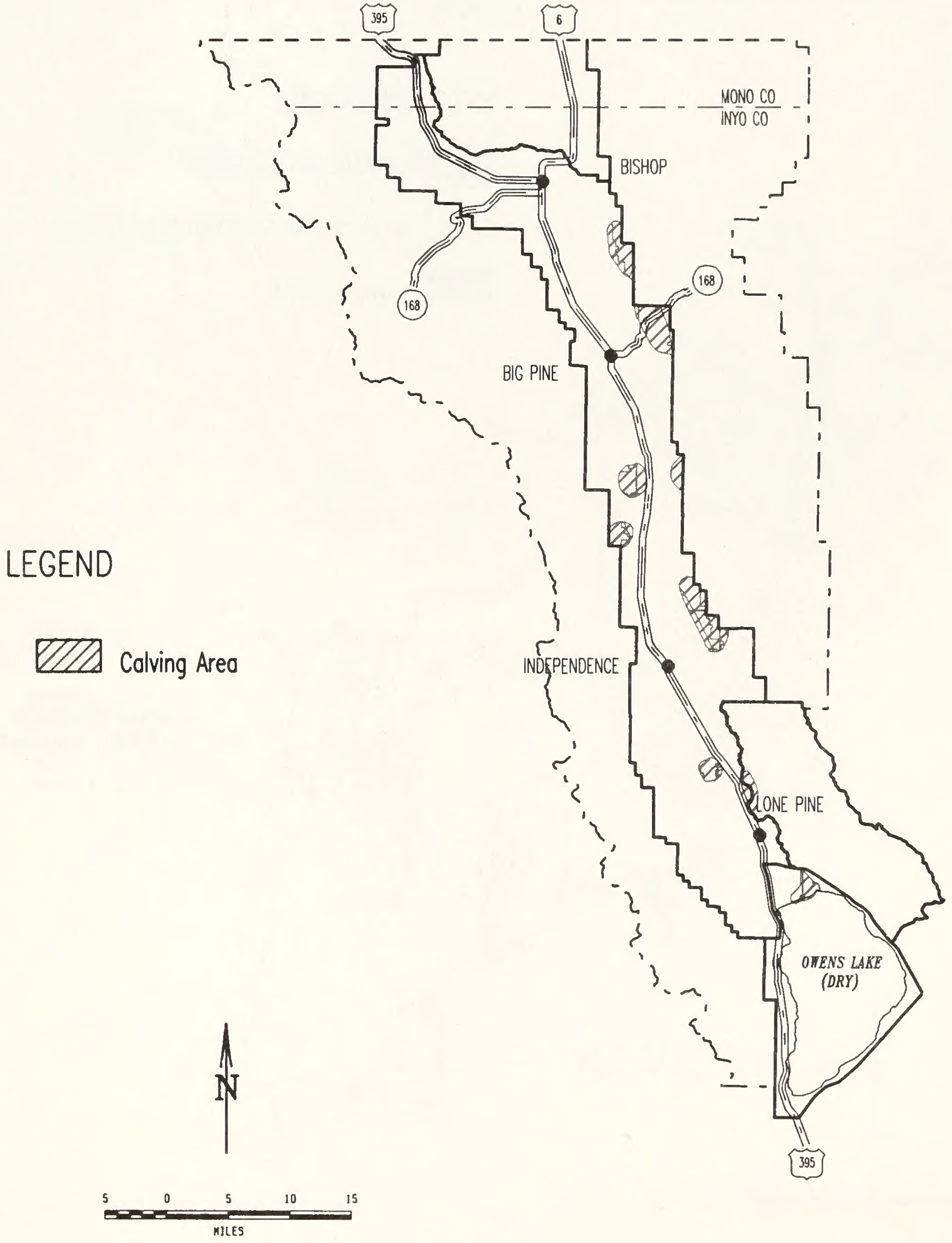

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Figure 3–4

PRONGHORN HABITAT

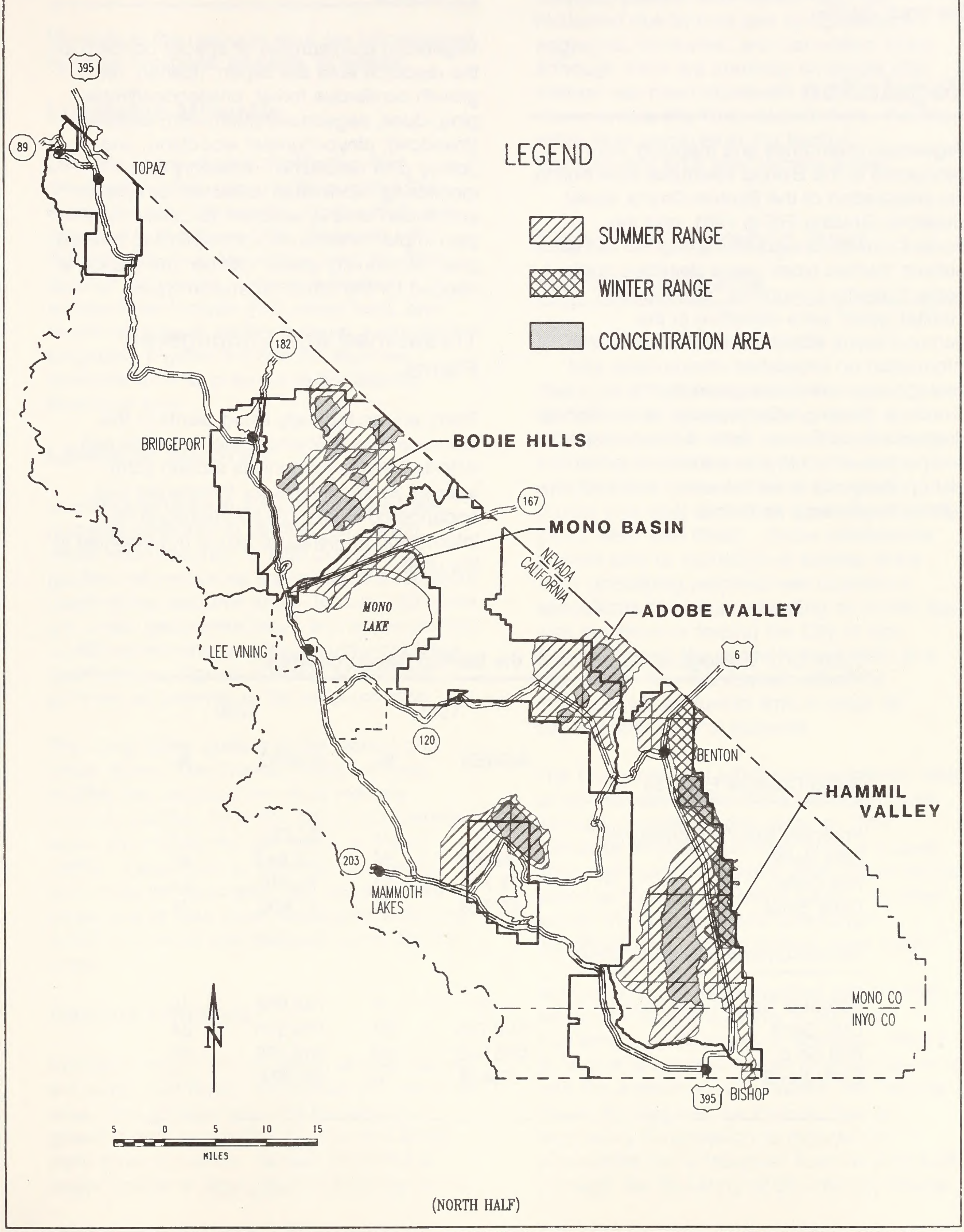

Figure 3-5

springs, ponds and reservoirs on Bureau land provide habitat for six native fish species and five trout species.

Vegetation

Vegetation inventories and mapping were conducted in the Bishop Resource Area during the preparation of the Benton-Owens Valley Livestock Grazing EIS in 1981, and the Bodie-Coleville Livestock Grazing EIS in 1982. Sixteen "habitat types" were classified in the Bodie-Coleville inventories, and fourteen "habitat types" were classified in the Benton-Owens Valley inventories. Detailed information on vegetation communities and ecological conditions is presented in the Livestock Grazing EISs available at the Bishop Resource Area Office. Table 3-1 provides a comparison of ecological conditions in the Bishop Resource Area between 1981 and 1990 (see glossary for terms).

Vegetation Communities of Special Concern

Vegetation communities of special concern in the resource area are aspen, riparian, old growth coniferous forest, bristlecone/limber pine, dune, sagebrush/bitterbrush, wetland (meadow), pinyon/juniper woodland, and Jeffrey pine woodland. Inventory and monitoring information collected for riparian and aspen sites is sufficient to determine if plan implementation is accomplishing desired plant community goals. Similar information is needed for the other vegetation types.

Threatened and Endangered Plants

There are no federally listed plants in the resource area. However, the U.S. Fish and Wildlife Service recognizes sixteen plant species as candidates for threatened and endangered status. See Appendix 6 for information on sensitive plants not included in the draft.

Table 3-1. Ecological Condition of the Bishop Resource Area.

	1981		1990	
	ACRES	%	ACRES	%
Bodie-Coleville EIS area				
Potential Natural Community	0	0	37,781	17
Late Seral	142,678	63	105,817	47
Mid Seral	71,765	31	71,870	31
Early Seral	12,625	6	11,600	5
Benton-Owens Valley EIS area				
Potential Natural Community	0	0	136,938	26
Late Seral	199,730	37	129,345	24
Mid Seral	265,053	49	207,075	38
Early Seral	73,449	14	64,874	12

Minerals

Minerals in the resource area are administered as either locatable, leasable, or salable.

Locatable Minerals

Over the years mineral exploration and development has occurred throughout the resource area. Historically, most activity has occurred in the Bodie Hills, Tungsten Hills, Poverty Hills, Inyo Mountains, and the Blind Springs Hill vicinity. Known locatable commodities include gold, silver, lead, zinc, beryllium, copper, barite, feldspar, sulfur, and tungsten. Figures 3-6 and 3-7 illustrate locatable mineral potential in the Bishop Resource Area.

Leasable Minerals

Leasable minerals in the resource area are primarily restricted to geothermal energy. Areas with moderate to high potential for geothermal resources are common throughout much of the resource area. To date 120 acres are under geothermal lease and approximately 10,000 acres have pending geothermal lease applications. Figures 3-8 and 3-9 portray geothermal potential in the resource area.

The Long Valley portion of the Mono-Long Valley Known Geothermal Resource Area (KGRA) has received the most industry interest, and has been the site of geothermal exploration since the late 1960s and early 1970s. Exploration in this area resulted in more than 50 exploration drill holes. Three power plants have been developed within the KGRA on private and National Forest System lands.

Salable Minerals

Salable minerals (sand, gravel, and volcanics) are widely distributed throughout the resource area. The greatest demand for sand and gravel is near population centers and along main travel corridors. Bureau lands are a major source of aggregate for road repair and construction projects. Demand for volcanics (cinders, pumice, and Bishop tuff) has increased due to their use as lightweight aggregate, abrasives, and decorative stone. Although there are currently no cinder pits, interest has been expressed in the cinder cones on the Big Pine volcanic field. Pumice sales have occurred in the Benton Management Area near Pumice Valley.

Land Ownership and Authorizations

Watershed Withdrawals

There are 600,000 acres of Bureau land in the resource area covered by watershed withdrawals which were enacted in the early 1930s (figures 3-10 and 3-11). These withdrawals include an Act of Congress (Public Law 864) and three Executive Orders (5843, 5631 and 6206). These withdrawals prevent sale or exchange of Bureau lands. Their underlying purpose was to prevent speculators from homesteading on public land with the intent of forcing the City of Los Angeles to buy the property from them at a high price. The withdrawals affect the management of Bureau land in ways far beyond their original purpose.

The Congressional withdrawal legislation refers to several other uses of the withdrawn land including recreation and grazing. This reference to other uses may grant a federal water right which predates other claims to the water (such as in the Mono Basin). In other words, the Congressional watershed withdrawal may protect federal water rights.

Another effect of the watershed withdrawals pertains to BLM's authority to include stipulations on hydropower licenses. Where BLM land is withdrawn from disposal (such as with the watershed withdrawals), the Federal Power Act requires the Federal Energy Regulatory Commission to include any stipulations on hydropower licenses that BLM (through the Secretary of the Interior) deems

LOCATABLE MINERALS POTENTIAL

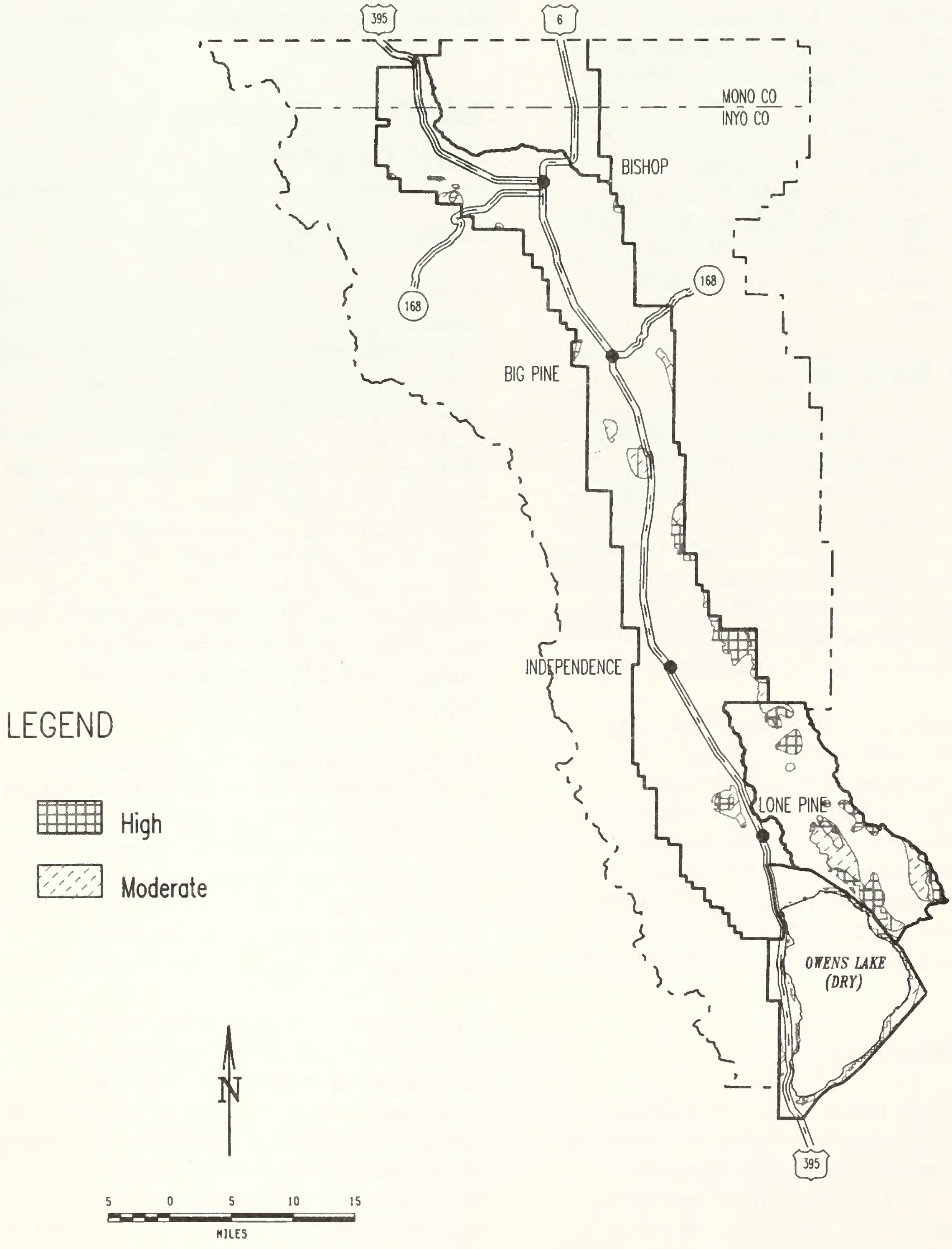

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Figure 3–6

LOCATABLE MINERALS POTENTIAL

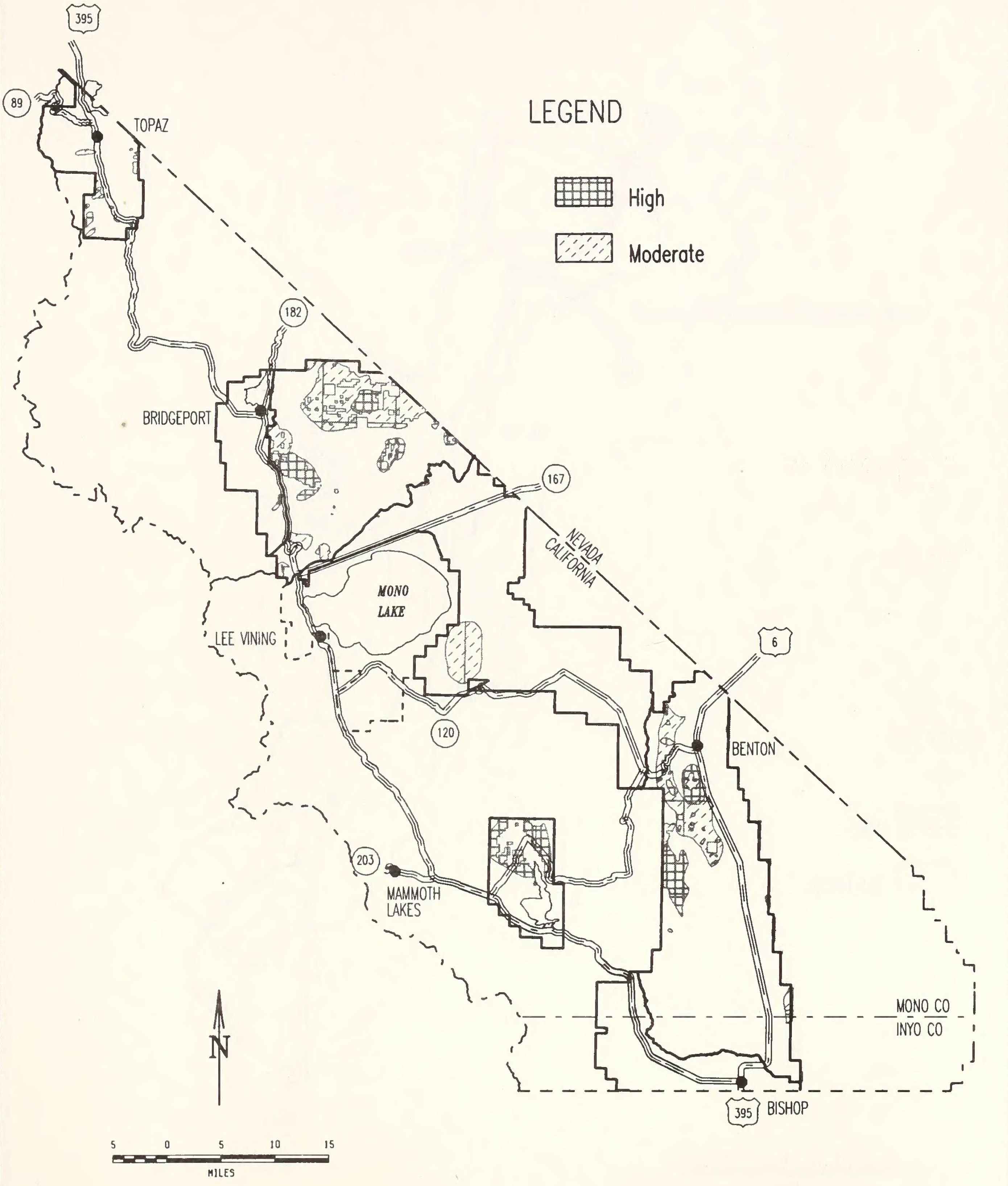

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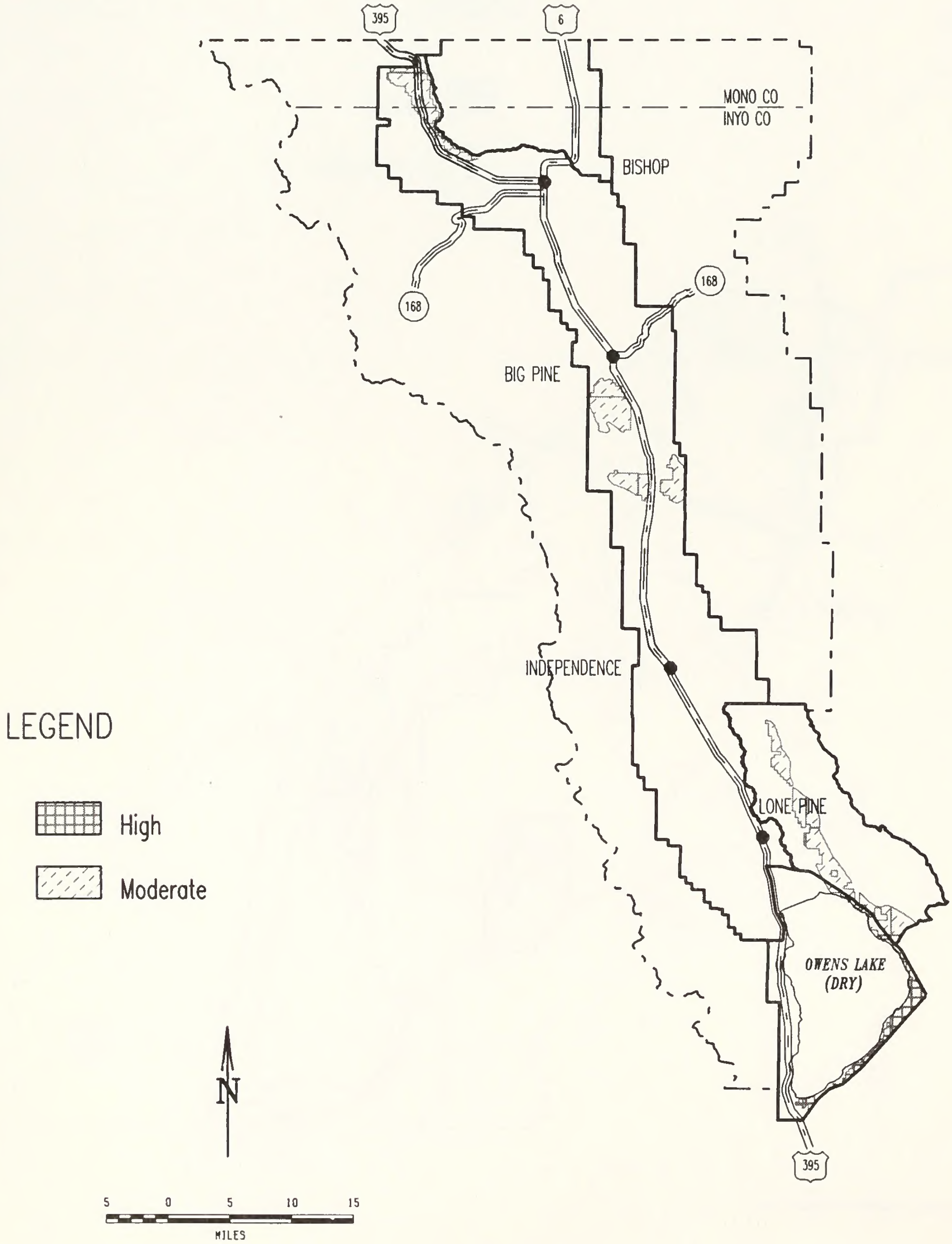
Figure 3–7

GEOTHERMAL MINERALS POTENTIAL



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GEOTHERMAL MINERALS POTENTIAL

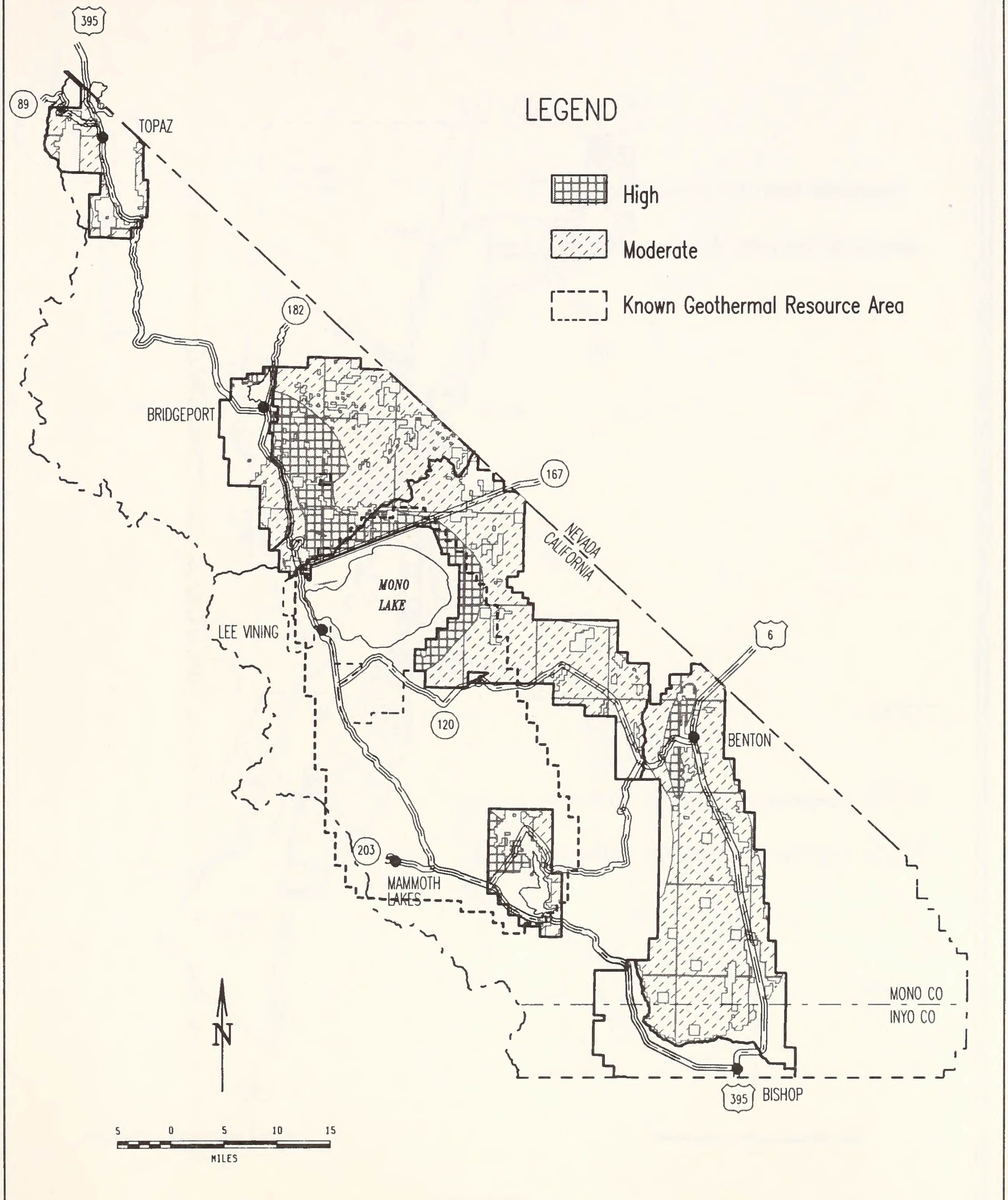

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Figure 3–9

EXISTING WATERSHED WITHDRAWALS

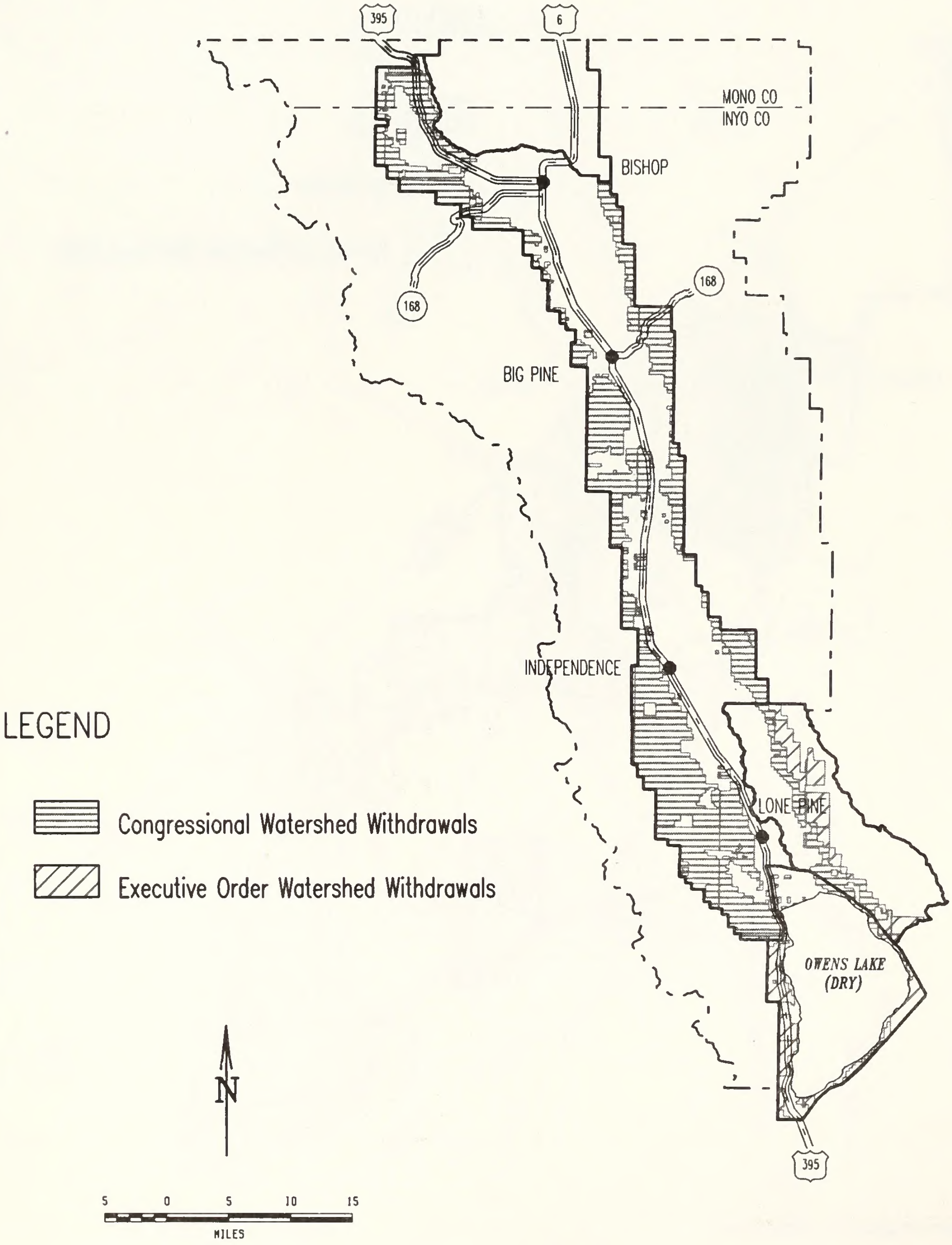

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Figure 3–10

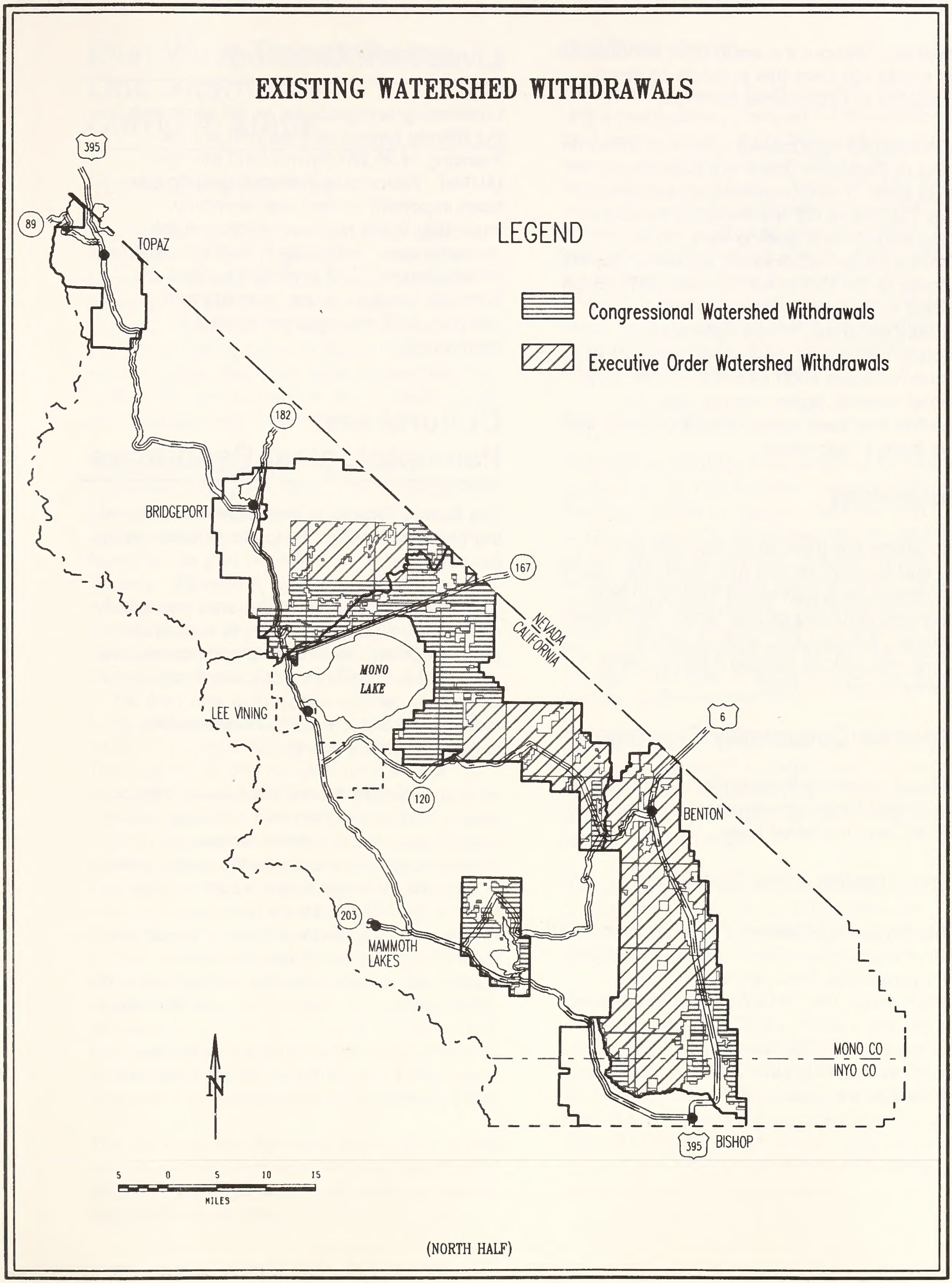

EXISTING WATERSHED WITHDRAWALS
LEGEND
▤ Congressional Watershed Withdrawals
▨ Executive Order Watershed Withdrawals
395
89
TOPAZ
182
BRIDGEPORT
167
NEVADA
CALIFORNIA
MONO LAKE
LEE VINING
6
120
BENTON
203
MAMMOTH LAKES
MONO CO
INYO CO
N
5 0 5 10 15
MILES
395
BISHOP
(NORTH HALF)

Figure 3–11

necessary. Without the watershed withdrawals BLM would not have this authority to insert stipulations in hydropower licenses.

The watershed withdrawals have little effect on mining or disposals under the authority of the mining laws. The Congressional withdrawal states that the lands will remain open to the mining and mineral leasing laws. The Executive Order withdrawals, issued under the authority of the Picket Act (36 Stat. 847), close the land to mining of nonmetalliferous locatable minerals. These minerals are generally defined as uncommon varieties of mineral materials such as sand, gravel, clay, pumice, cinders, agate, marble, talc, or travertine that have some unique property that gives them a high value.

Acquisitions

Acquisitions are used to consolidate Bureau land and improve overall manageability. Some landowners have expressed interest in land exchanges involving private lands near Indian Meadows, Adobe Lake, and Cedar Hill. Recent acquisitions include 1,200 acres at Conway Summit in 1989.

Disposals/Community Expansion

The local economy is constrained by a lack of land for residential development, community services, and industrial uses.

Transmission Line Corridors

Within the Bishop Resource Area there are 530 miles of transmission lines 115 kV and above. Major powerlines include the 500 kV DC Pacific Intertie, the 230 kV LADWP Owens-Rinaldi Line, the 115 kV SCE Double Circuit Line, the 115 kV SCE Bishop-Lee Vining Line, the 115 kV Auxiliary Line to Mammoth Lakes, and the 230 kV Oxbow Line.

Livestock Grazing

Livestock grazing occurs on 69 allotments in the Bishop Resource Area with annual licensing of 35,261 Animal Unit Months (AUMs). Historically livestock grazing has been important to the local economy, especially in the northern portion of the resource area. Appendix 1 contains allotment information on AUM preference, class of livestock, season of use, management category and management system (if applicable).

Cultural and Paleontological Resources

The Bishop Resource Area contains some of the best examples of cultural resources in the Great Basin.

Prehistoric occupation of the area was widely distributed, although tending to concentrate around certain resources. Site types include lithic scatters, small pinyon camps, other temporary camps, village sites and rock art. Occupation of the area has occurred for several thousand years.

Historic sites are mostly associated with mining and early settlement activities. Many historic sites are in private ownership. The most notable historic site in the eastern Sierra is the town of Bodie and the surrounding historic landscape. Bodie has been designated as a National Historic Landmark (one of only two on Bureau lands in California). Another notable historic site is the Saline Valley Salt Tram in the Inyo Mountains.

In the Bishop Resource Area, fossils are commonly found in Pennsylvania limestone and paleozoic rock formations.

East-West Transmission Line Alternative Corridor Areas

Pizona Corridor Area

The Pizona Corridor Area is located about 3 miles north of U.S. Highway 6, except the eastern-most third which includes National Forest lands to the south and east of the highway. It adjoins the northern boundary of the Queen Valley Corridor Area (Figure 3-12). Approximately five miles wide, it traverses the foothills of the Pizona area and includes lands near Montgomery Pass in Nevada.

Vegetation includes vast expanses of undisturbed pinyon/juniper. There are several springs and seeps which provide water, riparian habitat, and wetlands not commonly found in this part of California or western Nevada. Elevations range from 6,500 feet to 8,000 feet. The area is undeveloped and access is by a limited number of four-wheel drive roads. Key resources in the Pizona Corridor Area are shown in Figure 3-13.

Most of this corridor area is located in the Inyo National Forest's Pizona Management Area. The majority of this management area is allocated to semi-primitive recreation (Prescription 17). The purpose of this prescription is to limit vehicular access to existing designated routes and to protect and maintain recreation and wildlife values. No new road construction is permitted on National Forest lands under this prescription. A small portion is included in the Mule Deer Habitat Prescription Area (Prescription 4). The purpose of this prescription is to preserve or enhance key mule deer habitat to maintain or increase existing population levels; other management activities will be prohibited or reduced if they present unresolvable conflicts.

The Bureau's management theme for this area is to protect and enhance wildlife habitat and scenic values and to provide opportunities for dispersed recreation.

Wild Horse Habitat

This corridor area is located within the ranges of the Montgomery Pass and White Mountain Wild Horse Herds. It contains critical water sources and key foaling areas for the Montgomery Pass herd. Approximately 15-25 horses from the Montgomery Pass Herd winter in the foothills north and west of Benton Valley from November through March. Both herds are naturally regulated by mountain lion predation. Specific management guidance for these herds is detailed in the Montgomery Pass Wild Horse Territory Coordinated Resource Management Plan.

Key Wildlife Habitats

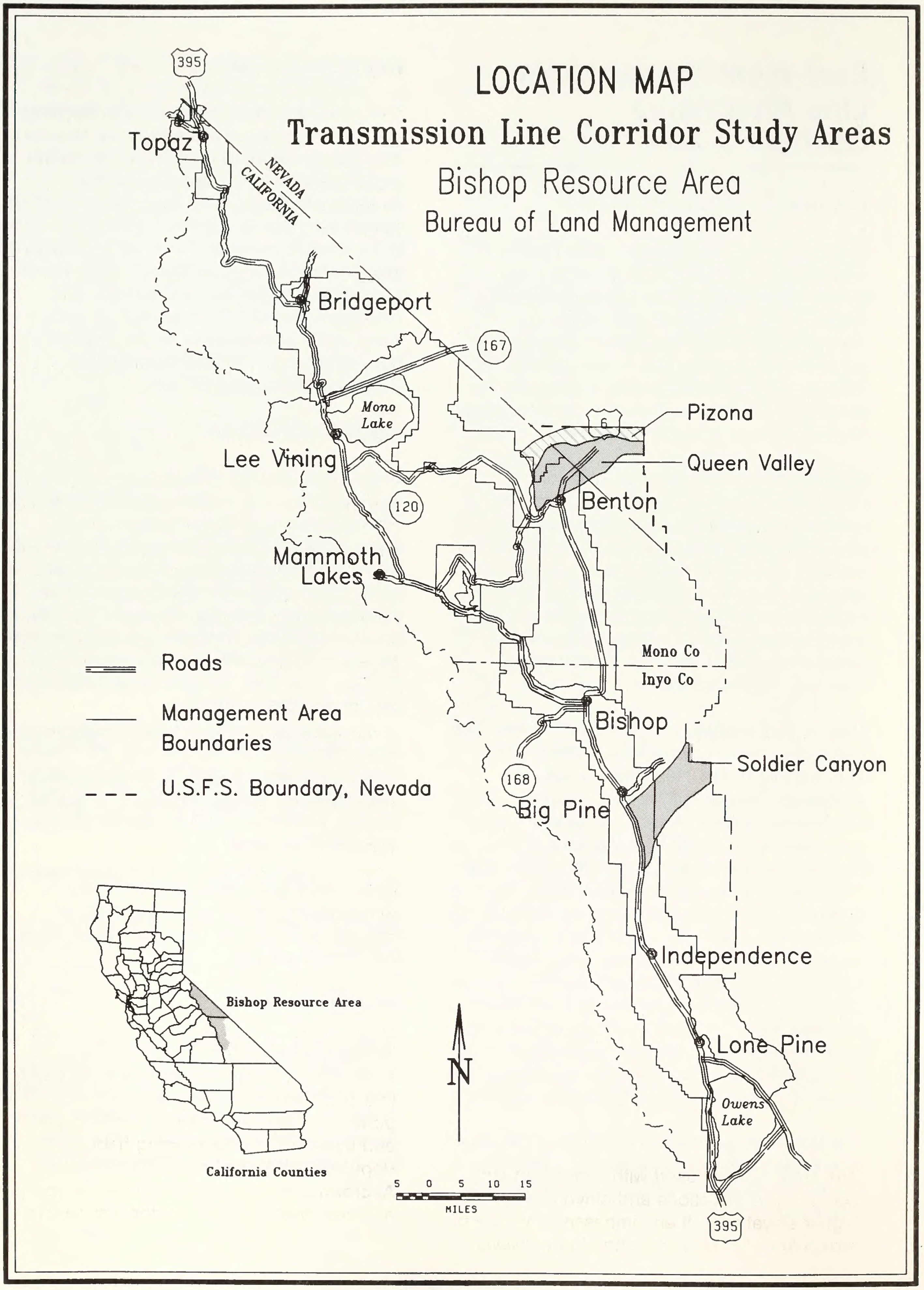
The Pizona Corridor Area provides habitat for approximately 100 summer resident mule deer. Fawning occurs in riparian, meadow and mixed pinyon/bitterbrush/sagebrush habitats within 1/4 mile of springs. Broken terrain within these vegetation types characterizes the preferred fawning areas. Preferred habitat is located largely on National Forest lands from the lower Pizona drainage to near McBride Spring. Less than 10% of the fawning habitat occurs on Bureau lands.

Approximately 300-500 deer use the Pizona area as a migration corridor to winter range near Huntoon Valley, Nevada. During mild winters, these deer tend to use the Pizona area as winter range.

About 10-15 pronghorn use the mixed pinyon-sagebrush zones in this area as fawning grounds. Fawning occurs primarily in the Nevada portion.

Sensitive Plants

No sensitive plant inventory has been conducted. However, based on experience with similar areas in this region, the probability is high for the occurrence of sensitive plants. Sensitive plant surveys would need to be conducted prior to any surface-disturbing activity.



LOCATION MAP

Transmission Line Corridor Study Areas

Bishop Resource Area

Bureau of Land Management

Figure 3–12

Visual Resources

Most of the area is not visible from main travel routes (U.S. Highway 6 and State Highway 120) or residential areas. Visible portions are greater than 5 miles from these key observation points, and are seen as background. The Inyo National Forest's Visual Quality Objective (VQO) for most of this corridor area is Partial Retention (PR), with a VQO of Retention in foreground zones along Highway 6 (in the Montgomery Pass portion of the corridor area). Bureau lands in this area are designated as Visual Resource Management (VRM) Class III.

Recreation

The area consists largely of an expansive, undisturbed pinyon pine forest in its natural condition. Only a few, primitive roads provide access to the area. As a result, recreation use consists primarily of 4-wheel drive touring, hunting, and outfitter guide operations. The majority of this area is managed by the Inyo National Forest for semi-primitive recreation (Prescription 17). Very little recreation occurs on Bureau lands in this area.

Cultural Resources

The area has one of the greatest concentrations of cultural resources on the Inyo National Forest. To date, over 40 known sites have been identified. Many isolated finds occur throughout the area. Traditionally, Pizona has been used by Native Americans as a main source of pinyon nuts and obsidian.

Queen Valley Corridor Area

The Queen Valley Corridor Area is a five-mile wide area that straddles U.S. Highway 6 from near Montgomery Pass, Nevada to Benton Hot Springs, California (Figure 3-12). It adjoins the southern boundary of the Pizona Corridor Area.

The area is semi-desert with sagebrush and scrub at low elevations and pinyon/juniper at higher elevations. It encompasses a variety of terrain from the Benton Range to the alluvial fans of the White Mountains. Elevations range from 5,000 feet to approximately 7,000 feet. The corridor includes the communities of Benton Hot Springs, Benton, and Montgomery Pass, and is the most populated of the three proposed corridors. Key resources in the Queen Valley Corridor Area are depicted in Figure 3-13.

National Forest lands north of U.S. Highway 6 in this corridor area are in the Inyo National Forest's Pizona Management Area. Those south of Highway 6 are located in the Forest's White Mountains Management Area and are allocated to multiple resource uses (Prescription 18). The emphasis of this prescription is on providing for the use of all resources. This prescription allows roads or other facilities to be constructed or upgraded in support of mineral, range, recreation, and other uses. Forest Service management direction for the area also states: "Participate with the Bureau of Land Management in the study of existing and potential powerline corridors...." A small portion near the corridor area's northern boundary is allocated to the Mule Deer Habitat Prescription (Prescription 4).

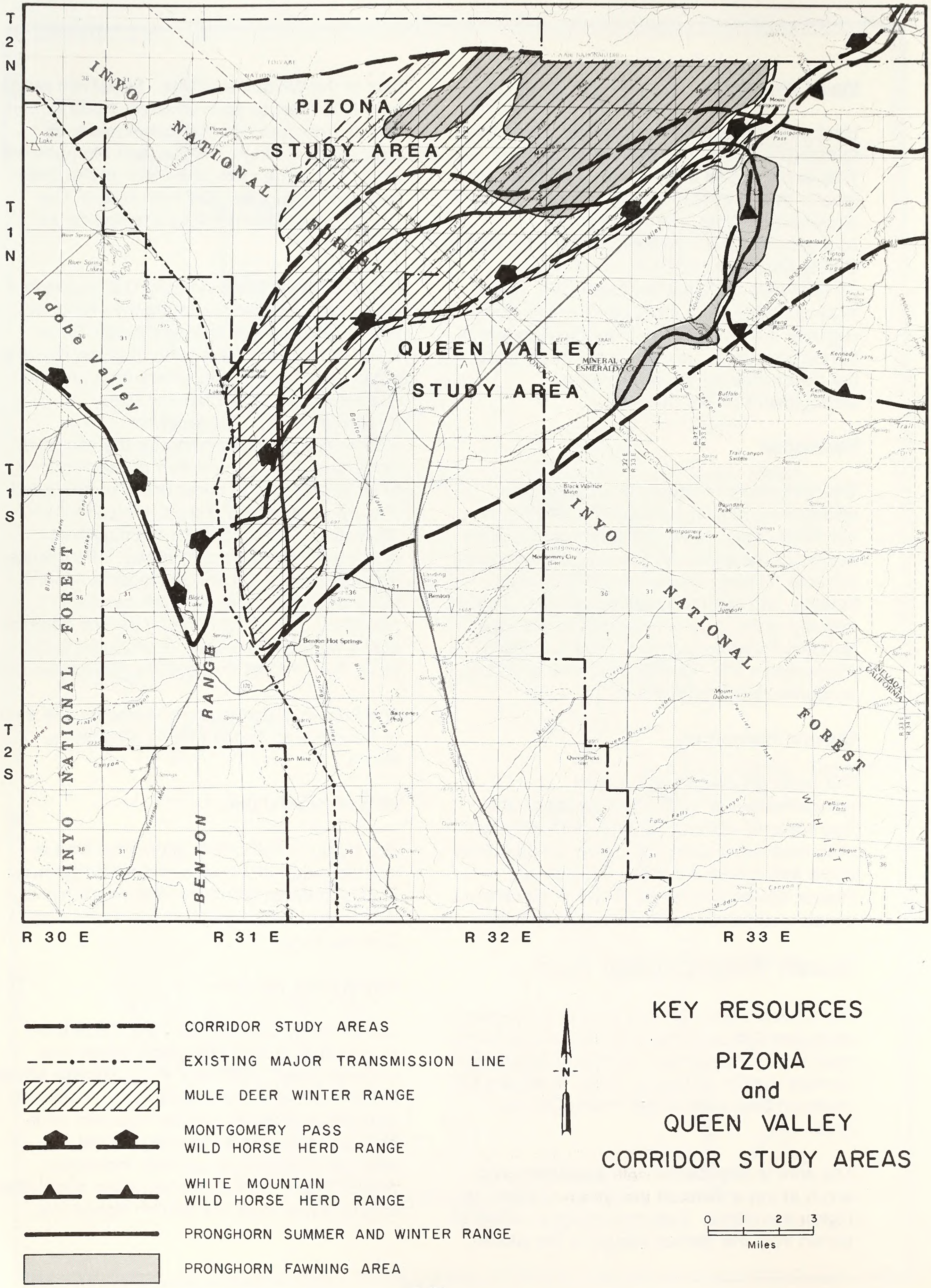
The Bureau's management theme for this area is the same as for the Pizona Alternative, above.

Wild Horse Habitat

The northern half of this alternative area is located within the ranges of the Montgomery Pass and White Mountain Wild Horse Herds. Wild horse use is similar to that in the Pizona Corridor Area.

Key Wildlife Habitats

Queen Valley and Benton Valley have been identified as crucial pronghorn winter and summer range. A total of 45-70 animals winter in this area from October to April. A resident population of 25-35 animals summers here and uses the area as fawning habitat. Population levels are currently increasing. Approximately 20% of the wintering population migrates west over the Benton Range into



KEY RESOURCES

PIZONA
and
QUEEN VALLEY
CORRIDOR STUDY AREAS

Figure 3-13

Adobe Valley. The migration route is located along the north side of Antelope Mountain.

Approximately 250-400 deer winter in this corridor area. Concentrated use occurs on the east slope of the Benton Range. Winter use primarily occurs in sites dominated by bitterbrush and other preferred forage species like winterfat. Deer use also tends to concentrate in areas near the few natural water sources. Deer infrequently use the valley bottom as a forage or thermal cover area.

Sensitive Plants

Sensitive plants have been identified in the Sugarloaf Mountain portion of this alternative area. Species include *Phacelia monoensis*, *Streptanthus oliganthus*, and *Trifolium andersonii* ssp. *beatleyae*. In Benton Valley there are populations of *Eriogonum ampullaceum* on BLM land.

Visual Resources

Most of this study area is visible from U.S. Highway 6 and State Highway 120. The topography offers the highway traveller expansive, open views of the Queen and Benton Valleys, the north end of the White Mountain Range, and the east slope of the Benton Range. The Forest Service's Visual Quality Objective for most of this area is partial retention. A portion of the northern White Mountain Range is managed with a VQO of Modification. Bureau lands are designated VRM Class II east of Highway 6 and VRM Class III west of Highway 6.

Recreation

Recreation opportunities consist of semi-primitive dispersed uses primarily related to off-highway vehicle touring. Use is considered relatively low.

Cultural Resources

This area has a large number of cultural sites. While perhaps not as densely concentrated as the Pizona area, parts of the area are quite sensitive.

Soldier Canyon Corridor Area

The Soldier Canyon Corridor Area is located three miles east of U.S. Highway 395 and the community of Big Pine, California (Figure 3-12). Approximately five miles wide, the corridor area crosses the Inyo Mountains in a northeasterly direction from the Owens Valley to Deep Springs Valley. Corridor area length is about ten miles.

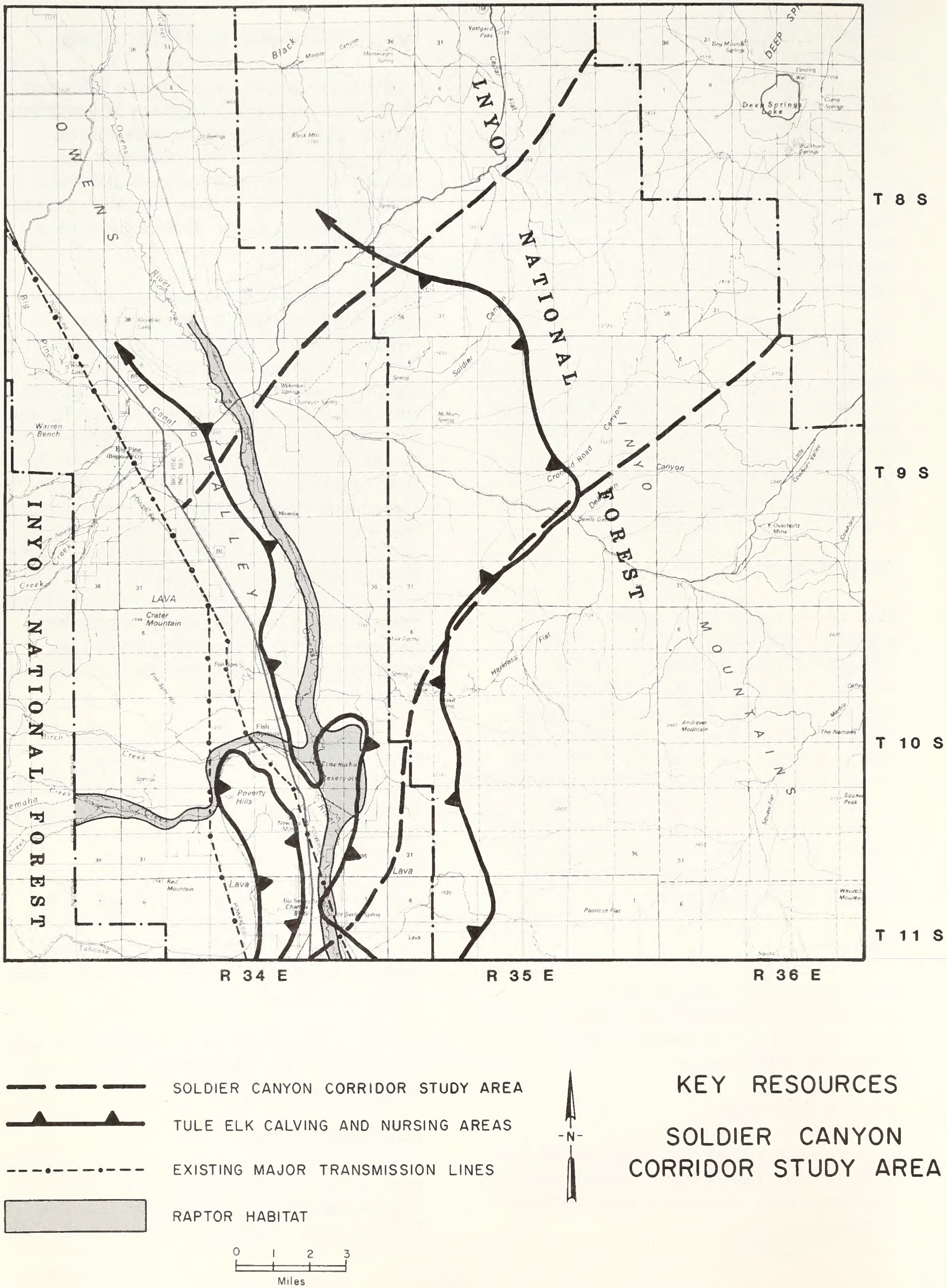
Soldier Canyon is at the northern end of the Inyo Mountains. The Inyos are an arid mountain range characterized by sagebrush in the lower elevations and pinyon pine at the higher elevations. Water is restricted to a few springs found at the lower elevations. Terrain is serrated with elevations ranging from 4,000 feet to 9,000 feet. The area is accessible by Waucoba Road and many primitive routes. Human disturbance consists primarily of recent and historic mining activity. Several ranches are located in the area at low elevations in the Owens Valley. The southeast portion of this corridor lies within the Paiute Wilderness Study Area (WSA CA-010-060B). This portion is unroaded and in a natural condition. Key resources in the Soldier Canyon Corridor Area are shown in Figure 3-14.

Inyo National Forest lands in the Soldier Canyon area are in the Inyo Mountains Management Area. This management area is allocated to multiple resource use (Prescription 18). Management direction also states: "Participate with the Bureau of Land Management in the study of existing and potential powerline corridors. Include in this study the need for additional north-south utility lines paralleling the existing Oregon-Sylmar HVDC transmission line and for new east-west corridor locations."

The Bureau's management theme for this area is to provide for a full spectrum of uses with emphasis on recreation.

Key Wildlife Habitats

Approximately 140-165 elk from the Tinemaha and Bishop herds use the Soldier Canyon Corridor Area. Much of the western half of this



KEY RESOURCES

SOLDIER CANYON CORRIDOR STUDY AREA

Figure 3-14

area has been identified as tule elk calving habitat. Calving occurs between March 1 and June 1. In addition to specific calving grounds, the majority of the area between Highway 395 and the base of the Inyos serves as nursery habitat from May to August. Elk also use areas north and west of Tinemaha Reservoir during the rut in August and September.

There is important raptor habitat near this corridor. American bald eagles (federal endangered species) winter in the Owens Valley from Klondike Lake south to Tinemaha Reservoir from late October through April. The number of eagles averages between 5-20 per year. Ferruginous hawks (Category 2 candidate for listing) use the same general habitat area as the bald eagle. The number of ferruginous hawks ranges from 5-10 birds per year. Ospreys use the area from April through September with as many as 5 nesting pairs. Golden eagles consistently forage within the Soldier Canyon area and use portions of Tinemaha Reservoir and Soldier Canyon as roosting sites.

Sensitive Plants

Sclerocactus polyancistrus, a sensitive plant species, is known to occur in several locations within this corridor area.

Visual Resources

Most of the area is visible from U.S. Highway 395, State Highway 168 (Westgard Pass Road), the Waucoba Road, and the community of Big Pine. Partial retention is the Visual Quality Objective for approximately 95% of the National Forest land included in the corridor area. The remaining National Forest land, within the foreground of the Waucoba Road, is managed for a VQO of retention. VRM Class III applies to Bureau lands.

Recreation

Recreation opportunities consist of semi-primitive dispersed uses including off-highway vehicle touring and caving. Additionally, Highway 168 and the Waucoba Road receive considerable use by motorists travelling to the Eureka Valley, the Ancient Bristlecone Pine Forest and the Owens Valley.

Cultural Resources

About 40 cultural resource sites have been identified and the area has been classified as having high cultural resources sensitivity.

Chapter 4

Impacts

Hot Creek - Identified for Wild and Scenic River Study.

Chapter 4
Impacts

Introduction

This chapter describes the environmental impacts of the proposed action (alternative 4) presented in Chapter 2. Impacts of all four alternatives are presented for the livestock grazing, minerals, and east-west transmission line corridor analyses, as these have been revised substantially since publication of the draft RMP/EIS. Please refer to the draft for all other impact analyses for alternatives 1, 2, and 3.

Since the proposed action describes overall management emphasis rather than specific projects or actions, the environmental consequences are expressed in comparative, general terms. In many cases, further analysis will be required to implement resource management decisions. More detailed or site-specific studies and appropriate environmental reviews will be prepared as needed, in compliance with the National Environmental Policy Act and its implementing regulations.

Impacts are assessed on an area-wide basis, as if all decisions for each of the 9 management areas were fully implemented. Impacts include direct, indirect and cumulative effects of the proposed action. The impact analyses also consider short-term uses versus long-term productivity, and any irreversible and irretrievable commitments of resources. Mitigation measures designed to avoid or reduce impacts are incorporated into the decisions. As a result, impacts identified in this chapter are considered unavoidable net effects.

The impact analyses consider both Bureau actions proposed in this RMP, and other actions throughout the eastern Sierra region that are anticipated during the life of the plan. As an example, while deer habitat will improve substantially on Bureau lands, deer habitat region-wide is expected to show a slight overall decline due to actions such as development on non-Bureau lands.

Grazing decisions analyzed in prior environmental impact statements are not reanalyzed in this document. The Benton-Owens Valley and Bodie-Coleville Grazing EISs (1981 and 1983) and related decisions are incorporated in this RMP by reference.

Impact Topics Analyzed

Thirteen impact topics are analyzed, including impacts on visual resources, recreation opportunities, sage grouse and quail, mule deer, tule elk, pronghorn, riparian and fisheries habitat, special status species, vegetation, locatable minerals, salable minerals, livestock grazing and cultural resources. These were identified during the scoping process as having the potential for significant environmental effects.

Impact Topics Eliminated from Analysis

Impacts on Geothermal Commercial Power Development Opportunities

Reasonably foreseeable development scenarios project a less than 5% chance that commercial geothermal power development will occur on Bureau lands during the life of the plan. This is based on economic projections, geothermal potential, and current and projected levels of industry interest. No Surface Occupancy stipulations, seasonal restrictions, or leasing withdrawals will have little or no impact on geothermal development. Impacts to existing leases will be negligible because of prior existing rights afforded in the lease agreement.

Impacts on Geothermal Direct Heating Development Opportunities

Reasonably foreseeable development scenarios project a greater than 90% chance that a direct heating project will be developed on an existing lease on Bureau lands at Travertine Hot Springs. Due to prior existing rights in the lease agreement, No Surface Occupancy stipulations, seasonal restrictions, or leasing withdrawals will have little or no impact on development.

Impacts on Solid Leasable Minerals

There is no potential for solid leasable minerals throughout most of the resource area. Low potential exists for sodium carbonate on BLM lands surrounding Owens Lake. No exploration or development of solid leasable minerals is anticipated in the next 10 to 20 years.

Impacts on Oil and Gas

There is little or no potential for oil and gas throughout the resource area. The resource area is underlain primarily by granitic or volcanic rocks, and there are no known source rocks for hydrocarbon in the region. No exploration for oil or gas is anticipated in the next 10 to 20 years.

Impacts on Air Quality

Air quality was initially considered as a topic to be addressed. The main sources of air pollution from Bureau lands are dust and exhaust emissions from activities such as vehicle use and mineral exploration and development. This results in temporary concentrations of airborne particulate matter and exhaust fumes. Environmental analyses will be conducted for any activities, such as prescribed burns, which may have significant adverse affects on air quality. Mitigation measures would be implemented to assure attainment and maintenance of air quality standards. A burn plan would also be submitted to the Great Basin Air Quality Control District before any prescribed burning. Overall use of Bureau land in the next 10 to 20 years is not expected to have a significant cumulative impact on air quality.

Impacts on Soils

Soils were initially considered as an environmental impact topic. The main impact to soils on Bureau lands is accelerated erosion caused by surface disturbance and vegetation manipulation. Site specific activity plans will include measures to reduce soil erosion resulting from any proposed action. In addition, many Standard Operating Procedures are designed to reduce soil erosion. It is anticipated that the proposed action would have little negative effect on soil erosion.

Impacts on Water Quality

Water quality was also considered as a topic to be addressed in the EIS. However, under projections of foreseeable use for the proposed action, negative impacts to water quality would be minimal. BLM intends to consult the Lahontan Regional Water Quality Control Board's individual water basin objectives and the State's 1990 Water Quality Assessment (WQA) to reduce water quality impacts. In addition, the majority of water quality problems in the resource area are related to non-point source pollution which is addressed in Sections 208 and 319 of the Clean Water Act and noted in the state's WQA for specific waters. Best Management Practices, Standard Operating Procedures and other mitigating measures will be incorporated at the activity plan level to address existing and potential water quality problems.

Assumptions of the Impact Analysis

The following assumptions and projections of future development and use provide the basis for the impact analyses in this chapter.

General Assumptions

1) All decisions will be implemented within 5 years of the EIS on the plan.

2) Unless otherwise specified, impacts shown are those expected to occur within 5 years after implementation.

3) Unless otherwise specified, short term impacts are those which occur within 5 years of implementation; long term impacts would occur 5 to 20 years after implementation. No attempt is made to predict impacts more than 20 years after implementation.

4) Unless otherwise specified, impact estimates are based on knowledge of the area and professional judgement of the resource specialists. In most cases, professional judgement is based on conditions and responses in the Bishop Resource Area and other similar areas.

5) Impacts are the difference between existing conditions and conditions 5 to 20 years after implementation of a given decision.

6) Near normal annual precipitation will occur.

7) Existing laws and policies will remain in effect.

8) The mitigation measures described for the transmission line corridor alternatives will be followed.

9) Multi-line facilities carrying loads greater than 115 kV will be constructed in all transmission line corridors.

Projections of Future Development and Use (Reasonable Foreseeable Development Scenarios)

Geothermal Resources Exploration and Development

The potential for geothermal development will remain strongly tied to oil prices. It is difficult to predict what effects political situations will have on oil prices, but we anticipate little or no long term increase in oil and gas prices. As a result, geothermal exploration and development is expected to continue at present low levels.

Increased electrical power demand coupled with a desire to decrease dependence on oil for power generation could, on a state-wide basis, increase the demand for alternative energy sources. However, the relatively small size and remote location of eastern Sierra geothermal resources make future development unlikely on Bureau lands.

Current and planned eastern Sierra geothermal developments (all on private and Forest Service lands) are based on commercial power contracts conceived during the height of the 1970's oil embargoes. According to industry sources, without these contracts commercial power generating projects in this region are unfeasible. Although catastrophic global energy disruptions could once again occur, they are not considered in these analyses.

Commercial power development

Geothermal industry sources project little or no possibility that California will reissue commercial power contracts in the eastern Sierra region in the next 10 years. Combined with low levels of industry interest, there is a less than 5% chance that a commercial power generating geothermal project will be proposed and developed on Bureau lands.

Although there are large areas within the resource area of high occurrence potential (primarily in Known Geothermal Resource

Areas), the development potential is generally low. The most likely location for a commercial power generating project is in the Long Valley caldera (Long Valley Management Area). However, according to recent geophysical studies, all Bureau land within the caldera is outside of the resurgent dome. Moreover, drilling on Bureau lands in this area yielded no anomalously high geothermal temperature gradients. The resurgent dome represents an underlying magma body thought to be at a 5 to 7 km depth, and is the most likely location for a commercial power plant.

A typical project includes: the drilling, construction and operation of geothermal production and injection wells; the construction and operation of gathering and injection systems; and the construction of a binary power plant and control facilities.

Direct heating applications

There is a greater than 90% chance that a geothermal project for direct heating applications will be developed on Bureau lands during the life of the plan. Mono County has received approval for a California Energy Commission grant to develop geothermal resources from an existing lease at Travertine Hot Springs (Bridgeport Valley Management Area).

The Travertine Hot Springs project will include a production well and injection well for reservoir maintenance. Thermal waters will heat fresh water by an on-lease heat exchanger. The heated fresh water will be piped to selected county and state facilities in Bridgeport.

All activities will be on an existing geothermal lease (the county plans on a lease assignment). The current lessee, Quadra, has the responsibility of ensuring that the existing wells, Bigfoot 1 and 2, are properly plugged and abandoned prior to lease assignment. No temperature gradient holes are planned.

Another direct heating project is under study involving federal leases within and near the town of Mammoth Lakes. No Bureau lands are involved. No other direct heating projects are projected within the resource area.

Locatable Mineral Exploration and Development

Within the 750,000 acre Bishop Resource Area there are 52,501 acres with high mineral potential (7%); 87,850 acres with moderate potential (11.7%); and 609,649 acres with low potential (81.3%). This mineral potential assessment is based on known mineral deposits and geologic maps. Mineral development would occur mostly in areas of high mineral potential within existing mining districts.

Over the past 140 years there have been approximately 280 mines on BLM land in the resource area. At present there are 36 Notices of Intent and 23 Plans of Operation on file. Notices of Intent are required for mining operations which disturb less than 5 acres; a Plan of Operation is required when more than 5 acres are disturbed. Twenty-four of the 36 notices are active, and 21 of the 24 plans are active.

Based on past trends, it is estimated that 108 notices and 60 plans will be active over the next 20 years. This projected activity would include about 250 acres of small mines and exploration projects of less than 5 acres each, and about 200 acres of large mines around 50 acres each.

The small mines would typically use a dredge or a sluice box to process up to 10,000 tons of ore from a placer deposit. The large mines would typically be heap leach operations that would process 100,000 to 300,000 tons of ore.

These projections are based on past trends and the assumptions that the price of gold will remain stable and interest in mineral development will continue at present levels. The projections do not consider the varying environmental constraints of the alternatives. The environmental constraints shown below would affect mining to varying degrees within each alternative.

Visual Resource Management (VRM) I

Exploration and small mining projects could probably be allowed with mitigation. Larger mining operations using conventional technology could be severely limited.

Yearlong Protection

Depending on the target resource, this restriction would have varying degrees of impact. Activity would be allowed where it would not harm the target resource, although mitigation could be expensive. Some large operations and many small operations may not be economically feasible.

Visual Resource Management (VRM) II

Mitigation of visual impacts could substantially increase costs of some mining operations. Many small operations may not be economically feasible.

Seasonal Protection

Depending on the target resource, and the length of the season, this restriction would have varying degrees of impact. Activity would be allowed where it would not harm the target resource during the specified period, though mitigation could be expensive. Some operations may not be economically feasible.

Salable Mineral Exploration and Development

An estimated 46% of the salable mineral deposits could be developed. We expect about 18 new mines/sales, involving about 160 acres over the next 10 to 20 years. There might be as many as 54 exploration projects prior to the sales.

Of the 18 new mineral material sales, 3 are expected to be major projects (more than 100,000 cubic yards, net value greater than $50,000), involving 10 acres each for a total of 30 acres. The other projects would be small (less than 1,000 cubic yards), involving less than 1 acre each.

An estimated 54% of the salable mineral deposits would not be developed due to economic or environmental reasons. Some pumice and dimension stone (Bishop Tuff) deposits in the Benton and Long Valley management areas would not be developed.

Sufficient material will be available within designated areas to meet all local building and highway construction needs.

Recreation Use and Development

The major landholders in the eastern Sierra are the Inyo and Toiyabe National Forests, the BLM, the National Park Service, and the City of Los Angeles, Department of Water and Power (LADWP). Recreation opportunities on these lands attract visitors from throughout the United States as well as other countries. Most visitor use occurs on the National Forests and National Parks. BLM and LADWP lands support about 30% of the total use. Most visitors come from southern California to use the area's numerous recreation facilities and resources. This includes alpine ski areas, campgrounds, wilderness, scenic areas, hunting areas, and fisheries.

The rapid growth of southern California, the demand for recreation resources, and the Forest Service's current management direction for recreation will slightly to moderately increase region-wide use. Proposed developments include alpine ski facilities at Sherwin Bowl, Minaret Summit, San Joaquin Ridge, and other areas. Additionally, various new trails, campgrounds and interpretive sites are planned. The pending Inyo County and LADWP water agreement would provide money to improve county park facilities and develop other recreation opportunities.

Region-wide, it is expected that most categories of recreational use will increase. However, dispersed recreation including off highway vehicle touring, camping, mountain biking, alpine and nordic skiing, and hiking will increase the most. Mammoth Mountain Ski Resort encourages summer mountain bike use and operates commercial mountain bike tours.

Under the proposed action, Bureau lands will attract more primary destination users than under alternatives 1 and 2. They will also receive spillover use from expected visitor increases on nearby Forest Service lands. The Bureau's proactive recreation management program, which includes a visitor services emphasis, scenic byway designations, dispersed semi-primitive recreation management, environmental interpretation, and an environmental education center, will moderately enhance regional recreation opportunities and increase visitor use. The Bureau will play a greater role in region-wide recreation management.

Significant recreational activities on Bureau lands will include sage grouse and deer hunting, and dispersed camping and fishing. Additionally, hunting opportunities exist on 890 acres of waterfowl habitat.

Other activities that will increase on Bureau lands include mountain biking, wildlife observation, nature appreciation, and hot springs bathing. Recreation use in the Bodie Bowl will increase slightly above existing levels. Over the long term, it is expected that the proposed environmental education center would receive up to 250,000 visitors per year.

Primary use areas on public lands will include Slinkard ACEC, Topaz Lake, Conway Summit ACEC, Travertine Hot Springs ACEC, Bodie Hills and the Bodie Bowl ACEC, south Tableland and the Fish Slough ACEC, Crater Mountain ACEC, Inyo Mountains, Owens Valley creeks, and the Alabama Hills.

Land Development

Land disposals and acquisitions would be approximately equal in area because most acquisitions and disposals will be accomplished by land exchange. A site-specific environmental analysis will be prepared for each exchange.

The bulk of lands identified for disposal are in the Owens Valley and Benton management areas. These lands would be used mostly for agriculture such as alfalfa or row crops. A smaller portion of the disposals, including parcels near communities, would be used mostly for low-density residential development with lot sizes ranging from 1 to 40 acres. A few tracts would be sold for community services such as the landfills at Chalfant, Benton, Bridgeport and Antelope Valley. Impacts from potential developments on public land that BLM gives up will be balanced by the removal from future development of private land that BLM acquires in exchange.

Impacts

Impact on Visual Resources

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 181 and 182.

Alternative 4: Proposed Action

The region-wide management of visual resources on Forest Service and Bureau lands will be most beneficial to maintaining or improving scenery in the eastern Sierra. Both the Inyo and Toiyabe National Forest plans recognize and emphasize the need to manage region-wide visual resources. Factors which contribute to the long term quality of the area's scenery are the Toiyabe National Forest's visual quality objectives that prescribe 46% of Forest Service lands for retention and partial retention; and the Inyo National Forest's prescriptions for retention and partial retention along major roads, trails, and concentrated recreation areas. These factors as well as the Bureau's emphasis to manage 92% of the resource area as VRM II (42%) and VRM III (50%) will contribute beneficially to the area's scenery.

City of Los Angeles (Department of Water and Power) lands are not managed primarily for scenic values. The minimal development that occurs on these lands would have little or no impact on Bureau management.

Bureau actions will reduce visual impacts within the resource area. The primary decisions causing this are more restrictive VRM Class I and II designations (6% and 42% of the resource area respectively, totalling 360,000 acres), acquisitions totalling 12,000 acres, restrictions in the Bodie Bowl, some mineral withdrawals, and proactive land use prescriptions (e.g. yearlong and seasonal protection, salable minerals prohibitions, etc.).

Off-highway vehicle route designations will benefit local visual resources more than under alternatives 1 and 2 because of greater VRM class restrictions and wildlife habitat protection. The stronger VRM class restrictions will result in the mitigation of more routes that visually scar landscapes, especially on hillsides. The Bridgeport Valley, Long Valley, Bodie Hills, and Owens Valley management areas will derive the greatest benefits.

The increased emphasis on improving wildlife habitat and watershed conditions will provide additional benefits to scenery on 105,000 acres where a desired plant community program will be implemented. Wildlife habitat management in association with desired plant community management will provide more uniform and vigorous vegetative cover which will help to maintain and improve visual resources in the resource area.

Significant areas benefitting from these decisions include the Slinkard Valley, Conway Summit, Crater Mountain and Bodie Bowl ACECs; the Mono Basin, Granite Mountain, south Tableland, and Virginia Creek areas; and the Alabama Hills Special Recreation Management Area.

In general, greater adverse visual impacts will occur in VRM Class III and IV areas than in VRM Class I and II areas because these classes allow more visual contrasts. These will primarily occur in portions of the Bodie Hills, Granite Mountain, Benton and Owens Valley management areas. Developments on over 5,000 acres of potential disposals in the Benton Management Area would degrade visual resources along 10 to 12 miles of Highway 6. Locatable mineral development could adversely affect localized viewsheds at specific locations of high or moderate mineral potential in the resource area. New transmission lines in the existing utility corridor of the Benton and Owens Valley management areas would adversely affect visual values along at least 3 miles of viewsheds.

Bureau actions will allow for fewer visual impacts than alternatives 1 and 2. Bureau areas with more restrictive VRM classes than the No Action alternative include the Slinkard Valley, Conway Summit, and Crater Mountain ACECs; the Bodie Hills; the Granite Mountain area; and the Volcanic Tablelands.

Conclusion:

Bureau decisions will lead to a slight to moderate improvement of scenic values on Bureau lands. An increase in VRM classes throughout scenic portions of the resource area contributes to this improvement. Cumulatively, the common region-wide management emphasis to maintain or improve visual resources by all land use agencies in the region would be most beneficial.

Impact on Recreation Opportunities

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 183 to 186.

Alternative 4: Proposed Action

Region-wide opportunities to meet future increases in, and demands for, recreation will be optimized in the eastern Sierra. The major landholders of the area emphasize recreation management as a primary regional goal. Although some alpine recreational ski developments are proposed, a major focus will be to enhance semi-primitive dispersed recreation opportunities and provide for environmental interpretation and education. The development of environmental education programs, including an environmental education center, will have region-wide impacts. Ultimately, the environmental education center will become a major focus for education programs and opportunities attracting area and out-of-area visitors. The development of an environmental education center is expected to attract as many as 250,000 visitors per year in the long term.

Bureau actions to enhance semi-primitive dispersed opportunities, provide for environmental interpretation and education, and improve recreational values would enhance overall recreation opportunities. Significant Bureau areas that have the highest opportunities include the Slinkard Valley, Conway Summit, Crater Mountain and Bodie Bowl ACECs; the Mono Basin, Granite Mountain and Volcanic Tableland areas; the Alabama Hills Special Recreation Management Area; and the southern Inyo Mountains.

Although area-wide route designations will in the long term enhance off-highway vehicle (OHV) use opportunities by maintenance of semi-primitive settings, greater OHV access and dispersed camping opportunities will be lost (compared to alternatives 1 and 2) due to sensitive viewsheds, desired plant community management, etc. However, displaced OHV users will find ample opportunities to experience loop and point-to-point trips in the resource area. Area-wide route designations in the activity plan process will result in improved signing, an enhanced OHV image, route/touring maps, and enhanced scenic and wildlife observation opportunities. These measures will maintain or increase the OHV users' opportunity to enjoy the quality of semi-primitive values in the resource area.

Snowmobiling will be prohibited on 5,700 acres of sage grouse wintering areas in the Bodie Hills Management Area, particularly around Bridgeport Canyon and the Dry Lakes Plateau where low use will result in little impact to snowmobilers.

Bureau land disposal in the southeast portion of the Benton Management Area will displace local OHV use opportunities and limit access to adjacent Forest Service land.

Deer, sage grouse and waterfowl hunting opportunities will increase slightly to moderately. The highest increases will occur in the Coleville, Bridgeport Valley, Bodie Hills, Long Valley, and South Inyo management areas, with 80 acres of waterfowl habitat available in the Bodie Hills. A loss of deer and sage grouse hunting opportunities in portions of the Bodie Bowl ACEC will occur due to the shooting prohibition. Inconvenienced hunters will find other opportunities outside this area.

Historic values at the Bodie Historic National Landmark will be maintained due to surface development restrictions. The proposed mineral withdrawal in portions of the Bodie Bowl ACEC will preclude new mining claims and help protect the area's recreation values. However, valid existing claims could still be developed. Visitor use will increase slightly above the present 188,000 visitors per year.

Yearlong protection and a shooting prohibition will augment recreation values in the Bodie Bowl. These actions will provide measures to maintain the area's historic values, and ensure protection of scenic features. Mineral development at the Golden Gate Mine in the Coleville Management Area could severely degrade historic values and recreation opportunities.

Semi-primitive values in the Bodie Hills and South Inyo management areas would be degraded by mineral development at Potato Peak and the foothills of the southern Inyo Mountains. A proposed mineral withdrawal on the Pat Keyes trail, most portions of Virginia Creek, and the upper reaches of Dog Creek will ensure long term protection of naturalness in these areas. Mineral development will have a negative impact on semi-primitive values near the confluence of Virginia and Dog Creeks. A salable mineral prohibition in the south Tableland will eliminate the most likely land use that threatens local natural values in that area. The portions of Dog Creek and Virginia Creek under the present mineral withdrawal (160 acres) will be protected in the long term.

Hot tub/spring use will increase moderately in Bridgeport Valley due to Travertine Hot Springs' growing popularity. The Bureau's increased focus to enhance and integrate recreational use with other resource values will better protect the area but result in closure of some hot tubs to manage threatened and endangered species habitat. The shooting prohibition at Travertine reduces gunfire hazards while a mineral withdrawal and yearlong protection will protect the area's geologic features. In the Long Valley Management Area, hot tub/spring use will increase moderately in the long term, due to the increased recreation management emphasis for the area. Some hot tubs will be closed or mitigated to protect wildlife or wetlands. Users will relocate to other hot tubs in the immediate area.

Recreation values will be moderately improved from protection of geologic features, camping/picnicking restrictions, site rehabilitation, etc. in the Alabama Hills Special Recreation Management Area. Sightseeing values will be maintained and restored, enhancing area recreation opportunities.

Wildlife observation will increase substantially in the Coleville, Long Valley and Benton management areas through improved sage grouse observation opportunities in Long Valley, and increased visitor services and environmental interpretation emphasis in the Slinkard Valley and Fish Slough ACECs.

Fishing opportunities in the Coleville, Bodie Hills, Bridgeport Valley and Owens Valley management areas will increase an average of 26% through habitat improvement caused by livestock grazing restrictions, diversion limitations, and habitat improvement projects.

Crowley Lake use and other dispersed camping will increase moderately. Camping use at Virginia Creek in the Bridgeport Valley Management Area will decline about 13% (500 visitors) in order to meet VRM Class I standards and desired plant community criteria. Unacceptable sites will be closed or mitigated to meet these standards. Additionally, some dispersed camping opportunities will be lost in seasonal protection areas in the Bodie Hills and Long Valley areas. It is expected that displaced campers will relocate to other areas nearby.

The most significant overall improvement under this alternative will be the management emphasis, which will increase the quality of recreation opportunities and experiences throughout the resource area. The prescriptions to improve these opportunities and experiences include 1) acquisition of 12,000 acres of private land, 2) eight scenic byway designations, 3) provision of environmental interpretation and other visitor services, 4) construction of an environmental education center, 5) management to protect and rehabilitate scenic resources, and 6) promotion of dispersed semi-primitive recreational activities. This emphasis will increase dispersed recreational use and experiences substantially.

Conclusion:

Bureau decisions will slightly to moderately improve recreation opportunities and values throughout much of the resource area. The Bureau's proactive management emphasis to improve and develop recreation opportunities will enhance visitors' recreational experiences more than alternatives 1 and 2. Cumulatively, region-wide recreation opportunities will increase through the provision of visitor services, promotion of dispersed recreational uses, and development of recreation facilities.

Impact on Sage Grouse and Quail

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 187 to 189.

Alternative 4: Proposed Action

Region-wide actions affecting habitat for sage grouse, California quail, and mountain quail include locatable and geothermal mineral development, livestock grazing, riparian habitat degradation, and increasing levels of recreational use. Not all actions affect each species.

Region-wide actions affecting sage grouse are generally located in the Long Valley, Fales Hot Springs, and Bodie Hills areas. Nesting, brood rearing, and summer habitat for the Long Valley population could be moderately to heavily impacted over the next 20 years. Actions specifically degrading or eliminating habitat include geothermal developments on private and Forest Service lands, locatable mineral development, continuation of early season cattle grazing on private meadow and riparian habitats, increasing levels of key habitat degradation from recreational activities on private land, and the lack of sagebrush habitat in early to mid-seral successional stages. The Fales and Bodie Hills populations are affected by livestock grazing, locatable mineral development, road construction, and some recreational use activities. Sage grouse populations have been significantly reduced region-wide over the past 20 years.

Region-wide actions affecting the quantity and quality of quail (primarily California quail) habitat include livestock grazing and other uses impacting riparian habitat. Dewatering of numerous stream reaches in the Owens Valley has also contributed significantly to a decline of quail habitat and overall numbers.

Bureau actions such as management for desired plant community goals and sage grouse lek protective measures will positively affect sage grouse habitat and population levels on Bureau lands. Sage grouse populations could increase up to 6% through improvement of key habitats despite anticipated impacts from locatable mineral and livestock grazing activities.

Quail habitat quality and availability on Bureau lands will be maintained overall. Improvement of important vegetation types will compensate in part for habitat loss from land disposals, mineral development and other actions.

Conclusion:

Bureau actions will cause a slight improvement in sage grouse habitat quality while maintaining or causing a slight loss in quail habitat availability. Region-wide actions will slightly diminish sage grouse habitat conditions and compound quail habitat loss on Bureau lands.

Impact on Mule Deer

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 189 to 191.

Alternative 4: Proposed Action

Region-wide actions affecting mule deer habitat include locatable and geothermal mineral development, livestock grazing, highway expansion, ski area development, hydroelectric project construction, increasing levels of recreational use, and residential and commercial development. Migration corridors and holding areas, primarily for the Sherwin, Buttermilk, and Casa Diablo deer herds, could be heavily impacted over the next 20 years.

New developments such as highway expansion and residential and ski area developments would fragment habitat in migration corridors and holding areas. This would reduce vegetation and eliminate traditional migration routes used by 6,000 deer. Deer mortalities from vehicle collisions cause a substantial loss to the regional deer population. Deer mortalities are expected to increase as U.S. Highway 395 is widened to 4 lanes.

Livestock on migration corridors and winter ranges compete with mule deer for forage, particularly in the Sherwin, Buttermilk, Casa Diablo and Mono Lake herd areas. Generally, grazing degrades riparian zones and severely reduces forage and cover needed for fawning.

Hydroelectric projects along some major streams have eliminated or reduced the size of riparian areas, negatively affecting deer habitat.

Bureau actions such as desired plant community and riparian enhancement goals will significantly increase deer habitat quality from the current situation. Deer populations on winter and summer ranges could increase up to 2%. The Bureau components of migration corridors and winter ranges will generally be managed for their value to mule deer. Acquisition of private parcels will protect migration corridors and winter ranges from development. The West Walker, Mono Lake, Sherwin and Buttermilk deer herds will benefit the most from Bureau actions to protect and improve habitat conditions.

Conclusion:

Actions on Bureau land will improve habitat conditions for four deer herds. Cumulatively, region-wide habitat conditions for deer migratory corridors, holding areas, and winter ranges will undergo a moderate decline.

Impact on Tule Elk

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 191 and 192.

Alternative 4: Proposed Action

Actions influencing vegetative conditions and disturbance of calving areas are the primary factors affecting tule elk habitat in the region. Continued export of surface and subsurface water resources from the Owens Valley is expected to lower water tables and result in a subsequent loss of forage quality and quantity. Combined with existing livestock use, a slight to moderate negative impact to tule elk forage resources will occur. Increased recreational use, highway expansion, off-highway vehicle route proliferation, locatable mineral exploration and development, and other human disturbances could have a moderate negative impact on region-wide tule elk habitat conditions. Significant adverse impacts will result from disturbance of calving areas during critical use periods.

Overall, Bureau actions will improve vegetation conditions and protect calving areas. A combination of increased forage availability and improved vegetation conditions in desired plant community areas will have a slight to moderate positive impact on overall forage conditions. However, off-site water harvesting, particularly of ground water resources, will significantly reduce BLM's ability to meet some desired plant community goals. Habitat acquisitions will consolidate BLM lands in the Owens Valley and improve opportunities for habitat management and protection. Yearlong protection of all BLM-managed calving areas will protect the integrity of 45% of the region's calving habitat.

Conclusion:

Bureau actions will improve habitat conditions and ensure calving area habitat quality is maintained. Cumulatively, region-wide actions will cause a slight negative impact to forage resources and general habitat conditions.

Impact on Pronghorn

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 192 and 193.

Alternative 4: Proposed Action

Region-wide actions affecting pronghorn habitat quality and quantity include livestock grazing, mineral exploration and development, residential development, and increasing levels of recreational use. Subdivision of private lands for residential development is expected to fragment pronghorn habitat on the White Mountain bajada and will have a slight negative impact on pronghorn in the Benton Valley and a moderate impact in the Hammil Valley area. Predicted increases in recreational use will increase human disturbance in pronghorn areas and slightly aggravate the loss of habitat to consumptive uses.

Generally, Bureau actions will improve overall pronghorn habitat conditions in the region. A combination of improved water distribution, and increased forage availability and improved vegetation conditions in desired plant community areas will have a significant positive impact on 45% of the region's pronghorn habitat. Mineral exploration and development is expected to result in the direct loss of less than 1% of the available habitat. An indirect loss of additional habitat will occur due to behavioral avoidance of developed areas by pronghorn. Impacts from locatable mineral development would be concentrated on BLM lands in the Bodie Hills and on the White Mountains fans. The disposal of BLM land in the Benton and Hammil Valley areas will contribute to developmental impacts; however, these impacts will be mitigated by habitat acquisitions that will consolidate BLM lands in the Benton, Hammil Valley and Adobe Valley areas. These acquisitions will improve management and protection of crucial pronghorn habitat.

Conclusion:

Bureau actions will have a significant positive impact on approximately one-half of the region's pronghorn habitat. Cumulatively, region-wide actions will have a slight to moderate positive impact on overall pronghorn habitat condition.

Impact on Riparian and Fisheries Habitat

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 194 and 195.

Alternative 4: Proposed Action

Region-wide riparian and fisheries habitat conditions are affected primarily by livestock use, recreational use, hydroelectric power generation, locatable and geothermal mineral development, habitat improvement projects, and water diversion for irrigation and domestic use. The greatest impacts result from livestock grazing and water diversion. Existing impacts include reduced vegetative cover, vigor and diversity, and loss of streambank stability and instream habitat quality. Predicted increases in recreation levels are expected to increase demand for riparian and fisheries resources and compound existing impacts. Habitat improvement projects will restore habitat conditions in localized areas and affect about 30-40% of the region's resource. Productivity of the region's fisheries will improve, but remain below potential and unable to meet demand.

Overall, Bureau actions will mitigate a portion of off-site impacts and improve region-wide riparian and fisheries habitat conditions. A combination of managing 76% of the riparian habitat in the resource area to meet desired plant community goals and constructing numerous habitat improvement projects will significantly improve habitat conditions. Bureau restrictions on stream and spring diversions will slow the loss of habitat to hydroelectric power generation and other activities that require water diversions. Yearlong protection of all BLM managed riparian areas will provide additional protection for riparian and fisheries resources. Improvements in riparian habitat quality will also increase fisheries productivity and help meet demand.

Conclusion:

Bureau actions will significantly improve riparian and fisheries habitat conditions. Region-wide negative impacts will be offset by substantial Bureau riparian and fish habitat improvements resulting in an overall slight positive impact.

Impact on Special Status Species

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 195 to 197.

Alternative 4: Proposed Action

Region-wide actions affecting special status species habitat include locatable and geothermal mineral development, livestock grazing, ski area development, road maintenance, off-road vehicle use, other recreational activities, and residential, commercial and agricultural expansion. The majority of these threats to special status species are occurring in the eastern Sierra region between the communities of Bridgeport and Lone Pine. Special status plant and wildlife species confined to small, geographically isolated habitats (for example, Great Basin springsnails) are highly susceptible to habitat and population loss.

Other animal species (for example, bald eagle and peregrine falcon) are less susceptible to region-wide impacts due to their ability to move to other locations. The majority of the 60-plus special status species in the region will be highly susceptible to habitat degradation or loss over the next 20 years. The regional trend toward expansion of the recreation based economy, exploitation of mineral resources, water diversion and export, and community and agricultural expansion will increase the rate of special status species habitat and population loss, particularly for animals associated with aquatic environments and for upland plants.

Bureau actions such as land acquisitions, protective management of special status species habitats (11,000 acres) and special management on 71,000 additional acres will improve habitat and population conditions for many of the known special status species. Several special status (listed) animal species will be reintroduced, and significantly increase populations. Locatable mineral development will still substantially impact 14 populations of 4 special status animal species.

Conclusion:

Bureau actions will cause a slight improvement in special status species' habitats. The Owens pupfish, Owens tui chub, and Lahontan cutthroat trout will be afforded the opportunity for down-listing or removal from formal listing under the federal Endangered Species Act. Region-wide activities will continue causing slight to moderate negative impacts on the majority of special status plant and animal habitats in the eastern Sierra.

Impact on Vegetation

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 199 and 200.

Alternative 4: Proposed Action

Region-wide actions affecting vegetation include locatable and geothermal mineral development, road construction, water diversion and export, livestock grazing, ski area development, hydroelectric project construction, timber harvest, and residential, commercial and agricultural expansion. Due to National Forest land management plans, some vegetation types like meadow and aspen are expected to improve in quality. Old growth or mature forest could decline in quality or amount over the long term based on Forest Service direction for potential developments.

Bureau locatable mineral development will eliminate approximately 1,500 acres of vegetation with less than 1% occurring in meadow, riparian, aspen, and old growth vegetation types. Acquisitions will increase (by 55%) the acreage of meadow, riparian, and aspen placed under desired plant community management bringing the total to 7,900 acres. Regional improvements will add to the trend of increasing the quality and productivity of these vegetation types. Desired plant community management will maintain or improve 103,000 acres of dune, pinyon-juniper, Jeffrey pine, old growth, sagebrush-bitterbrush, and bristlecone pine vegetation communities. The other 645,500 acres of vegetation in the resource area will remain in their present condition for the long term.

Conclusion:

Bureau actions will measurably improve the quality and availability of plant and animal biomass in at least three vegetation communities. Vegetation conditions will be maintained or improve in the other six vegetation communities. Region-wide actions will slightly improve aspen vegetation types. Little to no change will occur in the areal extent and quality of the other vegetation types.

Impact on Mining: Locatable Minerals

To identify impacts, the mineral withdrawals and restriction areas were overlain with the areas of high and moderate mineral potential. Where the withdrawn and restricted areas overlap, the acreage of the most restrictive impacts are shown. The order of relative impact, from highest to lowest, is listed as follows: 1) Mineral Withdrawals, 2) Visual Resource Management Class I (VRM I), 3) Yearlong Protection, 4) Visual Resource Management Class II (VRM II), and 5) Seasonal Protection.

Alternative 1: No Action/Continuation of Present Management

Mineral Withdrawals

Mineral withdrawals would not affect valid existing rights. However, they would prevent filing of any new mining claims in the withdrawn areas.

Under this alternative 60,900 acres (8% of the resource area) could be withdrawn from mineral entry. This would leave 689,100 acres (92% of the area) open for the exploration and development of locatable minerals.

The withdrawals would include 3,727 acres with high mineral potential (7% of the 52,501 acres of high mineral potential), and 4,862 acres with moderate mineral potential (6% of the 87,850 acres of moderate potential). This is more restrictive than alternatives 2 and 4.

Withdrawals of 8,589 acres of high and moderate mineral potential areas would have only a slight to moderate impact on the ability to develop minerals within the resource area.

Visual Resource Management (VRM) I

Exploration and development projects would be allowed only where they would not attract attention. Mitigation would be expensive. Mining operations using conventional technology would be severely limited.

No areas with high or moderate mineral potential will be affected by VRM I under this alternative.

Yearlong Protection

Mining activity would be allowed where it would not harm the target resource. Some large operations and many small operations would not be economically feasible in these areas.

Seven percent (3,477 acres) of the area of high mineral potential would be affected by yearlong protection. None of the moderate potential would be affected.

Yearlong protection of 3,477 acres of high potential areas would only slightly impact potential mineral development.

Visual Resource Management (VRM) II

Mitigation of visual impacts could substantially increase costs of mining operations. Some small operations would not be economically feasible.

Seventeen percent (9,183 acres) of the area with high mineral potential and 9% (8,345 acres) of the area with moderate mineral potential would be covered by VRM II restrictions.

VRM II restrictions on 17,528 acres of high and moderate potential areas would only slightly impact potential development.

Seasonal Protection

Mining activity would be allowed where it would not harm the target resource during the seasonal protection period. Mitigation could be expensive. Some operations would not be economically feasible. Temporary exploration activities would be only slightly affected.

Seasonal restrictions would cover 13% (6,926 acres) of the area of high mineral potential, and 17% (14,793 acres) of the area of moderate mineral potential.

These restrictions would only slightly affect mineral development.

Under this alternative, operations would be subject to normal economic costs to develop a deposit. Exploration projects could be completed with minor constraints.

Conclusion:

Withdrawals of 8,589 acres of high and moderate potential would have a slight to moderate impact on the ability to develop minerals within the resource area. VRM II and seasonal restrictions would increase exploration and development costs only slightly. Exploration and development projects could be completed with minor constraints. The restrictions in alternative 1 are greater than alternative 2 and less than alternatives 3 and 4.

Cumulatively, the restrictions in this alternative would result in slight to moderate impacts to development costs and the overall ability to develop some mineral deposits. The total restrictions include 44% of high mineral potential and 32% of moderate mineral potential.

Alternative 2: Custodial Management

Mineral Withdrawals

Mineral withdrawals will not affect valid existing rights. However, they would prevent filing of any new mining claims in the withdrawn areas.

Under this alternative 30,900 acres (4% of the resource area) could be withdrawn from mineral entry. This would leave 719,100 acres (96% of the area) open for the exploration and development of locatable minerals.

The withdrawals would include 2,933 acres with high mineral potential (6% of the 52,501 acres of high mineral potential), and 2,824 acres with moderate mineral potential (3% of the 87,850 acres of moderate potential). Compared to alternative 1, this is a decrease of 2,832 acres of high and moderate mineral potential areas. See Table 4-1 for acreage comparisons between all alternatives.

Withdrawals of 5,757 acres of high and moderate potential areas would only slightly impact developer's ability to operate within the resource area.

Visual Resource Management (VRM) I

Exploration and development projects would be allowed only where they would not attract attention. Mitigation would be expensive. Mining operations using conventional technology would be severely limited.

Areas with high mineral potential would be affected by 3 acres of VRM I. Areas with moderate mineral potential would not be affected.

VRM I restrictions would have no impacts under this alternative.

Yearlong Protection

Mining activity would be allowed where it would not harm the target resource. Some large operations and many small operations would not be economically feasible in these areas.

Three percent (1,812 acres) of the area of high mineral potential would be affected by yearlong protection. Areas with moderate mineral potential would not be affected.

Yearlong protection of 1,812 acres of high potential areas would only slightly impact mineral development.

Visual Resource Management (VRM) II

Mitigation of visual impacts could substantially increase costs of mining operations. Some small operations would not be economically feasible in these areas.

Two percent (910 acres) of the area with high mineral potential and 4% (1,980 acres) of the area with moderate mineral potential would be covered by VRM II restrictions. Compared to alternative 1, this is a decrease of 14,638 acres of high and moderate potential areas.

VRM II restrictions on 2,890 acres of high and moderate potential areas would only marginally impact mineral development.

Under this alternative, operations would be subject to fewer than normal restrictions. Exploration projects could be completed with only minor constraints and it would be possible to develop some deposits which under other alternatives would be economically marginal.

Conclusion:

Withdrawn areas would drop to 5,757 acres of high and moderate potential, causing only slight impacts to potential development. VRM I, yearlong, and VRM II restrictions are expected to increase exploration and development costs marginally. There are no seasonal restrictions. Mineral exploration and development is not as restricted in this alternative. Impacts to mining are relatively low due to yearlong and VRM II restrictions affecting only 5% of the high mineral potential areas. Exploration projects could be completed with only minor constraints. It would be possible to develop some deposits which under other alternatives would be economically marginal.

Cumulatively, the restrictions in this alternative would result in slight to moderate impacts to development costs and the overall ability to develop some mineral deposits. The total restrictions include 11% of high mineral potential and 5% of moderate mineral potential.

Alternative 3: Natural Resource Enhancement

Mineral Withdrawals

Mineral withdrawals would not affect valid existing rights. However, they would prevent filing of any new mining claims in the withdrawn areas.

Under this alternative 91,000 acres (12% of the resource area) could be withdrawn from mineral entry. This would leave 659,000 acres (88% of the area) open for the exploration and development of locatable minerals.

The withdrawals would include 8,545 acres with high mineral potential (16% of the 52,501 acres of high mineral potential), and 11,090 acres with moderate mineral potential (13% of the 87,850 acres of moderate potential). Compared to alternative 1, this is an increase of 4,818 acres of high potential areas and 6,228 acres of moderate potential areas. See Table 4-1 for acreage comparisons between all alternatives.

Withdrawals of 19,635 acres of high and moderate potential would have a moderate impact on the ability to develop minerals within the resource area.

Visual Resource Management (VRM) I

Exploration and development projects would be allowed only where they would not attract attention. Mitigation would be expensive. Mining operations using conventional technology would be severely limited.

VRM restrictions would affect 199 acres (.4%) of high mineral potential areas, and 538 acres (.6%) of moderate potential areas. VRM I restrictions would only slightly impact mineral operations.

Yearlong Protection

Mining activity would be allowed where it would not harm the target resource. Some large operations and many small operations would not be economically feasible in these areas.

Seven percent (3,825 acres) of the area of high mineral potential and 6% (5,451 acres) of the area of moderate mineral potential would be affected by yearlong protection. Compared to alternative 1, this would be an increase of 348 acres (less than 1%) in the high mineral potential areas and 5,451 acres (6%) in moderate potential areas.

Yearlong protection of 5,799 acres of high and moderate potential areas would slightly to moderately impact potential development.

Visual Resource Management (VRM) II

Mitigation of visual impacts could substantially increase costs of mining operations. Some small operations would not be economically feasible in these areas.

Twenty-two percent (11,680 acres) of the area with high mineral potential and 20% (18,012 acres) of the area with moderate mineral potential would be affected by VRM II restrictions. Compared to alternative 1, this would be an increase of 2,500 acres of high potential and 9,667 acres of moderate potential.

VRM II restrictions on 29,692 acres of high and moderate potential areas would moderately impact potential development.

Seasonal Protection

Mining activity would be allowed where it would not harm the target resource during the seasonal protection period. Mitigation could be expensive. Some operations would not be economically feasible. Temporary exploration activities would be only slightly affected.

Seasonal restrictions cover 28% (14,753 acres) of the area of high mineral potential, and 27% (23,791 acres) of the area of moderate mineral potential. Acreage with seasonal protection would nearly double over alternative 1.

Seasonal restrictions would moderately impact potential development.

Under this alternative, many operations would be subject to greater than normal economic costs to develop a deposit. Exploration projects could be completed with minor constraints. Because of these restrictions, marginally economic deposits would not be developed past the exploration stage.

Conclusion:

Withdrawals of 19,635 acres of high and moderate potential would have a moderate impact on the ability to develop minerals within the resource area. VRM I and yearlong restrictions would increase exploration and development costs. Some mineral deposits within VRM I or yearlong protection areas could be uneconomical to develop. These restrictions would have a slight to moderate impact upon potential mineral development. VRM II and seasonal restrictions are expected to increase exploration and development costs moderately. Exploration projects could be completed with minor constraints. Many operations would be subject to greater economic costs to develop a deposit. Because of these restrictions, some marginally economic deposits would not be developed past the exploration stage. This alternative is the most restrictive, with relatively high amounts under withdrawal, yearlong protection, VRM II and seasonal protection.

Cumulatively, the restrictions in this alternative would result in moderate to severe impacts to development costs and the overall ability to develop some mineral deposits. Total restrictions include 74% of high mineral potential and 67% of moderate mineral potential.

Alternative 4: Proposed Action

Mineral Withdrawals

Mineral withdrawals will not affect valid existing rights. However, they will prevent filing of any new mining claims in the withdrawn areas.

Under this alternative 33,300 acres (4% of the resource area) could be withdrawn from mineral entry. This would leave 716,700 acres (96% of the area) open for the exploration and development of locatable minerals.

The withdrawals will include 4,500 acres with high mineral potential (9% of the 52,500 acres of high mineral potential), and 2,903 acres with moderate mineral potential (3% of the 87,850 acres of moderate potential). Compared to alternative 1, this is a decrease of 1,185 acres within high and moderate potential areas. Compared to alternative 3, it is a decrease of 13,731 acres within high and moderate potential areas. See Table 4-1 for acreage comparisons between all alternatives.

Withdrawals of 7,400 acres of high and moderate potential will slightly impact the ability to develop mineral deposits within the resource area.

Visual Resource Management (VRM) I

Exploration and development projects will be allowed only where they will not attract attention. Mitigation will be expensive. Mining operations using conventional technology will be severely limited.

VRM I restrictions will cover 5 acres with high mineral potential, and 537 acres (.6%) of the area with moderate mineral potential. VRM I restrictions would only slightly impact mineral development.

Yearlong Protection

Mining activity will be allowed where it will not harm the target resource. Some large operations and many small operations will not be economically feasible.

Thirteen percent (6,683 acres) of the area of high mineral potential and 6% (5406 acres) of the area of moderate mineral potential would be affected by yearlong protection. Compared to alternative 1, this would be an increase of 5,406 acres of high and moderate potential areas. Compared to alternative 3, it is an increase of 2,813 acres of high and moderate potential areas.

Yearlong protection of 12,089 acres of high and moderate potential areas will slightly to moderately impact mineral development.

Visual Resource Management (VRM) II

Mitigation of visual impacts could substantially increase costs of mining operations. Some small operations would not be economically feasible.

Twenty-five percent (13,017 acres) of the area with high mineral potential and 30% (26,166 acres) of the area with moderate mineral potential would be affected by VRM II restrictions. Compared to alternative 1, this is an increase of 16,361 acres.

VRM II restrictions on 39,183 acres of high and moderate potential areas will moderately impact mineral development.

Seasonal Protection

Mining activity will be allowed where it will not harm the target resource during the seasonal protection period. Mitigation could be expensive. Some operations will not be economically feasible. Temporary exploration activities will be only slightly affected.

Seasonal restrictions would affect 28% (14,753 acres) of the area of high mineral potential, and 27% (23,798 acres) of the area of moderate mineral potential. Compared to alternative 1, this is an increase of 16,832 acres of high and moderate potential areas.

Seasonal restrictions on 38,551 acres of high and moderate potential areas will moderately impact potential development.

Under this alternative, more of the area would be open to mineral development. However, many operations would be subject to greater than normal economic costs to develop a deposit. Exploration projects could be completed with minor constraints. Because of these restrictions, some marginally economic deposits will not be developed past the exploration stage.

Table 4-1. Restrictions in High and Moderate Mineral Potential Areas.

High Potential Mineral Areas: 52,500 Acres

	Withdrawn	VRM I	Yearlong	VRM II	Seasonal	Total
Alternative 1	3,727 (7%)	0	3,477 (7%)	9,183 (17%)	6,926 (13%)	23,313 (44%)
Alternative 2	2,933 (6%)	3	1,812 (3%)	910 (2%)	0	5,658 (11%)
Alternative 3	8,545 (16%)	199 (.4%)	3,825 (7%)	11,680 (22%)	14,753 (28%)	39,002 (74%)
Alternative 4	4,500 (9%)	5	6,683 (13%)	13,017 (25%)	14,753 (28%)	38,959 (74%)

Moderate Potential Mineral Areas: 87,850 Acres

	Withdrawn	VRM I	Yearlong	VRM II	Seasonal	Total
Alternative 1	4,862 (6%)	0	0	8,345 (9%)	14,793 (17%)	28,000 (32%)
Alternative 2	2,824 (3%)	0	0	1,980 (2%)	0	4,804 (5%)
Alternative 3	11,090 (13%)	538 (.6%)	5,451 (6%)	18,012 (20%)	23,791 (27%)	58,882 (67%)
Alternative 4	2,903 (3%)	537 (.6%)	5,406 (6%)	26,166 (30%)	23,798 (27%)	58,810 (67%)

Conclusion:

Withdrawals of 7,400 acres of high and moderate potential will only slightly impact the ability to develop mineral deposits within the resource area. This includes a withdrawal of 1,500 acres within the Bodie Bowl. Acreage with seasonal protection will nearly double over alternative 1, and will be the same as in alternative 3. VRM I and yearlong restrictions will increase exploration and development costs. Mineral deposits within VRM I or yearlong protection areas could be uneconomical to mine. These restrictions will have a moderate impact upon mineral development. VRM II and seasonal restrictions are also expected to increase exploration and development costs moderately. Exploration projects could be completed with minor constraints. Many operations will be subject to greater economic costs to develop a deposit. Because of these restrictions, some marginally economic deposits will not be developed past the exploration stage. Alternative 4 is more restrictive than 1 or 2, but less restrictive than 3. There are lower amounts under withdrawal, but relatively high amounts under yearlong protection, VRM II and seasonal protection.

Cumulatively, while less restrictive than alternative 3, this alternative would still result in moderate to severe impacts to mineral developers. Total restrictions include 74% of high mineral potential and 67% of moderate mineral potential.

Impact on Mining: Salable Minerals

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 197 and 198.

Alternative 4: Proposed Action

Resource area wide, an estimated 54% of the salable mineral deposits would not be developed due to economic or environmental reasons. Some pumice and Bishop Tuff deposits in the Benton and Long Valley management areas would not be developed.

Sufficient material will be available within designated areas to meet all local building and highway construction needs.

Impact on Livestock Grazing

Alternative 1: No Action/Continuation of Present Management

Regionally, livestock operations involve use of BLM, Forest Service, or City of Los Angeles (Department of Water and Power) lands. Increased concern by the public and the two federal agencies for improving vegetative conditions and aquatic and terrestrial wildlife habitats has increased management emphasis to ensure that livestock grazing is compatible with achieving other resource goals.

Developing and implementing mitigation measures by changing grazing practices, and development of range improvement projects would result in increased costs to many operators. This may affect their ability to continue an economically viable operation using public land.

Many operators have grazing use on both Forest Service and BLM allotments, with a careful balance of head numbers and seasons of use. A substantial change in use on one allotment will, in most cases, create an impact to other allotments. Having several federal allotments does not in itself contribute to increased flexibility.

Cattle and sheep operators in 18 of 69 allotments in the resource area would be affected by the decisions proposed in this alternative. The allotment name (with C or S for cattle or sheep allotment) where an impact would occur is shown for each decision listed below.

One decision would contribute to a negative impact:

1) Disposal of a moderate amount of Bureau land - Mono Settlement (S), Bramlette (C), Laws (C)

Three decisions would contribute to positive impacts:

1) Authorization of cattle use on allotments after necessary fencing and water facilities are installed by permittees - Frazier Canyon (C), Fish Slough (C), Keough (C), Black Rock (C), Sherwin (C)

2) Incorporation of an unallocated area into the Ash Creek allotment - Ash Creek (C)

3) Implementation of AMPs to improve habitat conditions - Green Creek (S), Mormon Ranch (S), Blind Springs (C), Marble Creek (C), Hammil Valley (C), Hot Creek (C), Wilfred Creek (C), Round Valley (C), Alabama Hills (C)

Sheep Operations

This alternative would have a slight negative impact to one sheep operator in the Mono Settlement Allotment. This operator would be slightly impacted by the disposal of 80 acres north of Mono City to provide for residential expansion and community services. He would be unable to continue grazing on this parcel. Impacts are slight due to the small amount of acreage involved and its low carrying capacity.

Each operator on the Green Creek and Mormon Ranch allotments would experience slight to moderate positive impacts through implementation of Allotment Management Plans (AMPs) expected to yield an increase in livestock carrying capacity.

Cattle Operations

Bureau actions would have slight to moderate negative impacts to two operators on two allotments, slight to moderate positive impacts to six operators on nine allotments, and moderate positive impacts to four operators on four allotments.

Disposal of approximately 6,500 acres in the Bramlette Allotment and approximately 1,400 acres in the Laws Allotment would have slight to moderate negative impacts to two cattle operations if the land transferred to the control of someone other than the permittee. Should this occur there would be a loss of approximately 18% (100 AUMs) on the Bramlette Allotment and approximately 16% (25 AUMs) on the Laws Allotment. Other land disposals were determined to have no impact to existing livestock operations.

Four small scale cattle operations would benefit if they would build fences and develop livestock watering facilities in the Frazier Canyon, Keough, Black Rock, and Fish Slough allotments. This would provide the following AUMs of additional forage: Keough (29), Black Rock (36), Fish Slough (39) and Frazier Canyon (223).

The livestock grazing prohibition (until an AMP is developed) to improve deer winter range prescription would have a very minor impact on one operator who controls both the Sherwin and Round Valley allotments. This operator has not used these allotments for 25 years (keeping them as back-up, allowing for flexibility in his operation) and has indicated that he does not have a need for these allotments at this time. The operator would benefit through implementation of AMPs for those allotments.

Expanding the Ash Creek allotment to include the unallocated area east of the aqueduct would result in slight positive impacts to one operator. The operator would need to build fences and watering facilities before the use would be authorized for 35 cattle.

The remaining five operators on six allotments would benefit slightly to moderately from an increase in livestock carrying capacity from AMP implementation.

Bureau actions such as public land acreage disposals would have slight to moderate negative impacts to three operators on three allotments. Prohibition of cattle grazing until AMP implementation would be a minor negative impact for one operator on two allotments. Four permittees would receive slight positive benefits from acquiring use of four allotments currently vacant. Seven allotments are expected to benefit from allotment expansion or AMP development.

Conclusion:

Actions on Bureau land would continue to improve rangeland conditions for livestock and other resources to a moderate degree. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to operators are expected to cause little to no change in the regional livestock industry.

Alternative 2: Custodial Management

Region-wide and Bureau actions are the same as those identified under alternative 1, except that fewer AMPs would be implemented by the Bureau. This would afford slight benefits to operators by allowing less controls imposed on the BLM grazing operation, thus increasing their management flexibility and avoiding the additional costs of operating under an AMP.

Cattle and sheep operators in 7 of 69 allotments in the resource area would be affected by some Bureau decisions proposed under this alternative. The allotment name (with C or S for cattle or sheep allotment) where an impact would occur is shown for each decision listed below.

Two decisions would contribute to negative impacts:

1) Disposal of a moderate amount of Bureau land - Mono Settlement (S), Bramlette (C), Laws (C)

2) Prohibiting livestock grazing (until allotment management plans are written) to improve deer winter range - Sherwin (C), Round Valley (C)

Two decisions would contribute to positive impacts:

1) Authorization of cattle use on the Frazier Canyon Allotment after necessary fencing and water facilities are installed by a permittee - Frazier Canyon (C)

2) Incorporation of an unallocated area into the Ash Creek Allotment - Ash Creek (C)

Sheep Operations

This alternative would have a slight negative impact to one sheep operator in the Mono Settlement Allotment. This operator would be slightly impacted by the disposal of 80 acres north of Mono City to provide for residential expansion and community services. He would be unable to continue grazing on this parcel. Impacts are slight due to the small amount of acreage involved and its low carrying capacity. He would have to shift grazing to other public or private lands within the allotment. Controlling the herd to stay off of that parcel would not be a significant impact to the operator.

Cattle Operations

Bureau actions would have a slight to moderate negative impact to three operators and slight to moderate positive impacts to three operators.

Disposal of approximately 6,500 acres in the Bramlette Allotment and approximately 1,400 acres in the Laws Allotment would have slight to moderate negative impacts to two cattle operations if the land transferred to the control of someone other than the permittee. Should this occur there would be a loss of approximately 18% (100 AUMs) on the Bramlette Allotment and approximately 16% (25 AUMs) on the Laws Allotment. Other land disposals were determined to have no impact to existing livestock operations.

The livestock grazing prohibition (until an AMP is developed) to improve deer winter range prescription would have a very minor impact on one operator who controls both the Sherwin and Round Valley allotments. This operator has not used the allotments for 25 years (keeping them as back-up, allowing for flexibility in his operation) and has indicated that he does not need these allotments at this time. The operator would benefit through implementation of AMPs for those allotments.

One small scale cattle operation would benefit if fences and watering facilities were developed in the Frazier Canyon Allotment for 50 cattle.

Expanding the Ash Creek Allotment to include the unallocated area east of the aqueduct would result in slight positive impacts to one operator. The operator would need to build fences and watering facilities prior to use being authorized for 35 cattle.

Conclusion:

Actions on Bureau land would not result in improved rangeland conditions for livestock or other resources. Some negative and positive impacts to operators by Bureau actions would occur. Potential impacts to the regional livestock industry would be the same as identified under alternative 1. Overall this would be the least impacting (negatively or positively) alternative on livestock operations.

Alternative 3: Natural Resource Enhancement

Region-wide impacts are the same as for alternatives 1 and 2.

Bureau actions such as desired plant community goals, stricter utilization levels, required conversions from cattle to sheep and other decisions would affect approximately half of all operators on approximately one-third of all allotments. Costs of operating would increase as more tasks such as herding, hauling water, and maintaining range projects would be required, and fuel and other expenses would be higher. Impacts to the affected operators would be moderate to high.

Cattle and sheep operators in 20 of 69 allotments in the resource area would be adversely affected by some Bureau decisions proposed under this alternative. The allotment name (with C or S for cattle or sheep allotment) where an impact would occur is shown for each decision listed below.

The following decisions contribute to negative impacts:

1) Aspen, wetland, and riparian desired plant community management - Slinkard Valley (C,S), Dog Creek (S), Green Creek (S), Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Copper Mountain (S), Travertine Hills (C,S), Hot Creek (C), Wilfred Creek (C)

2) A 30% maximum grazing utilization on bitterbrush vegetation - Slinkard Valley (C,S), Dog Creek (S), Green Creek (S), Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Copper Mountain (S), Little Mormon (S), Mt. Biedeman (S), Mormon Ranch (S), Rancheria Gulch (S), Travertine Hills (C,S), Mono Lake (S), Mono Mills (S), Bramlette (C)

3) A 40% maximum grazing utilization on key grass species and 30% maximum utilization of bitterbrush within a 2 mile radius of sage grouse leks - Slinkard Valley (C,S), Dog Creek (S), Green Creek (S), Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Copper Mountain (S), Little Mormon (S), Mt. Biedeman (S), Mormon Ranch (S), Rancheria Gulch (S), Travertine Hills (C,S), Bramlette (C), Hot Creek (C), Wilfred Creek (C), Dry Canyon (C)

4) Sensitive plant habitat protection and enhancement - Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Mt. Biedeman (S), Travertine Hills (C,S), Bramlette (C), Hot Creek (C), Wilfred Creek (C)

5) Prohibiting livestock grazing to improve deer winter range - Sherwin (C), Round Valley (C)

6) Required conversion of cattle use to sheep use on some allotments - Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C)

7) Prohibiting grazing in the Slinkard Valley and Conway Summit ACECs, and on the Copper Mountain Allotment - Slinkard Valley (C,S), Dog Creek (S), Copper Mountain (S), Dry Canyon (C)

Sheep Operations

Bureau decisions would have moderate to severe negative impacts to eight sheep operators.

Elimination of sheep grazing in the Slinkard Valley and Copper Mountain allotments would cause a slight impact to the Slinkard Valley operator and moderate to high impact to the Copper Mountain operator. One third of the acreage and carrying capacity on the Dog Creek Allotment would be eliminated by the no grazing decision for the Conway Summit ACEC. This decision and others would cause a high impact to the Dog Creek operator.

Sheep operators would be most negatively impacted by two RMP decisions: the 30% maximum livestock utilization on bitterbrush, and the 40% utilization limit on key grass species within a 2 mile radius of sage grouse leks. The 30% maximum livestock utilization on bitterbrush would severely impact 4 operators on nine allotments. This is based upon an assessment of the percentage of acreage in each allotment with a current average utilization greater than 30%. All other operators would be moderately impacted.

The 40% utilization level on key grass species would be a further impact on the Travertine Hills and Little Mormon operators who run lactating ewes with lambs. This decision would cause a high impact to both operators. The decision would have moderate impacts on the other operators who run dry ewes.

Sheep operators' labor costs would increase due to stricter herding practices needed to comply with desired plant community goals, required utilization levels, and sage grouse habitat management. The sheep operator would have to supervise his herders daily to meet the RMP's standards. Operators might need to haul water and move herder camps more frequently resulting in higher fuel, labor and equipment maintenance costs. Shifting use to their private land in the allotment would be the least impacting solution to the operators.

Cattle Operations

Bureau decisions would affect eight cattle operations. The degree of impact would vary from moderate to severe for each operator.

Eliminating cattle grazing in the Slinkard Valley ACEC would cause a moderate to high impact to the one operator in that allotment.

The decision requiring conversion from cattle to sheep use would severely impact three operators. It is expected that none of these long-standing cattle operations would convert to sheep grazing. The loss of these summer allotments would substantially reduce the size of their cattle operations.

The decision limiting utilization on key grass species to 40% would impact the most operators. In concert with the other decisions affecting these allotments, the 40% use level would cause severe impacts to 6 of the 8 cattle operators.

The aspen, wetland, and riparian desired plant community management, and the sensitive plant habitat protection and enhancement would also affect cattle operators adversely.

The livestock grazing prohibition to improve deer winter range would have a minor impact on one operator who controls both the Sherwin and Round Valley allotments. This operator has not used these allotments for 25 years (keeping them as back-up, allowing for flexibility in his operation) and has indicated that he does not have a need for these allotments.

The impacts to cattle operations involve operators required to maintain strict utilization levels, change the season of use, or eliminate cattle use altogether in site specific areas of an allotment. To implement these management changes would result in increased labor, material and equipment costs. Shifting use to the private land in the allotment would be the least impacting solution to the operators.

Conclusion:

Actions on Bureau land would result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater long-term benefits to operators than any other alternative. The greatest amount of rangeland improvement would be realized under this alternative. However, this alternative would create moderate to high negative short-term impacts due to increased costs of conducting operations. Potential impacts on a regional basis would be moderate.

Alternative 4: Proposed Action

Region-wide impacts are the same as for alternatives 1, 2 and 3.

Bureau actions would be the same as under alternative 3 with the exceptions that the 40% use limit on key grass species, 30% use limit on bitterbrush around sage grouse leks, required conversion from cattle to sheep and ACEC grazing exclusions would not apply. Costs of operating would be similar in nature to those under alternative 3 but are predicted to be less impacting. The overall impact to most operators would be moderate.

Cattle and sheep operators in 20 of 69 allotments in the resource area would be adversely affected by some Bureau decisions in this alternative. The allotment name (with C or S for cattle or sheep allotment) where an impact would occur is shown for each decision listed below.

The following decisions contribute to negative impacts:

1) Aspen, wetland, and riparian desired plant community management - Slinkard Valley (C,S), Dog Creek (S), Green Creek (S), Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Copper Mountain (S), Hot Creek (C), Wilfred Creek (C)

2) A 30% maximum livestock grazing utilization on bitterbrush vegetation within deer migration corridors or winter ranges - Slinkard Valley (C,S), Dog Creek (S), Green Creek (S), Potato Peak (C), Bodie Mountain (C), Copper Mountain (S), Little Mormon (S), Mormon Ranch (S), Rancheria Gulch (S), Travertine Hills (C,S), Mono Lake (S), Mono Mills (S), Bramlette (C)

3) Habitat management within a 2 mile radius of sage grouse leks - Dog Creek (S), Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Little Mormon (S), Mt. Biedeman (S), Mormon Ranch (S), Travertine Hills (C,S), Hot Creek (C), Wilfred Creek (C)

4) Sensitive plant habitat protection and enhancement - Potato Peak (C), Aurora Canyon (C), Bodie Mountain (C), Mt. Biedeman (S), Mormon Ranch (S), Mono Mills (S), Hot Creek (C), Wilfred Creek (C), Bramlette (C)

5) Prohibiting livestock grazing prohibited to improve deer winter range - Sherwin (C), Round Valley (C)

6) Land disposals - Mono Settlement (S)

Sheep Operations

Bureau decisions would have moderate to severe negative impacts to eight sheep operators. There would be a minor negative impact to one operator. Sheep operators would be most negatively impacted by two RMP decisions: the 30% maximum livestock utilization on bitterbrush habitats located within deer migration corridors or winter ranges, and habitat management within a 2 mile radius of sage grouse leks. The 30% maximum livestock utilization on bitterbrush within the deer migration corridors or winter ranges would severely impact 5 operators in the Dog Creek, Green Creek, Rancheria Gulch, Copper Mountain and Mormon Ranch allotments. This is based upon an assessment of the percentage of acreage in each allotment with a current average utilization greater than 30%. Three other operators would be moderately impacted.

Sheep operators' labor costs would increase due to stricter herding practices in order to comply with desired plant community goals, required utilization levels, and sage grouse habitat management. The sheep operator would have to supervise his herders daily to meet the RMP's standards. Operators might need to haul water and move herder camps more frequently, resulting in higher fuel, labor and equipment maintenance costs. Shifting use to their private land in the allotment would be the least impacting solution.

This alternative would have a slight negative impact to one sheep operator in the Mono Settlement Allotment. This operator would be slightly impacted by the disposal of 80 acres north of Mono City to provide for residential expansion and community services. He would be unable to continue grazing on this parcel. Impacts are slight due to the small amount of acreage involved and its low carrying capacity.

Cattle Operations

The degree of impact from decision implementation would vary for each operator but is considered to be moderately adverse for the seven affected cattle operators.

The aspen, wetland, and riparian desired plant community management and sensitive plant habitat protection and enhancement would all affect cattle operators adversely. Cattle operators would be required to maintain strict utilization levels, change the season of use, or eliminate cattle use altogether in specific areas of an allotment. To implement these management changes would increase labor, material and equipment costs.

The livestock grazing prohibition to improve deer winter range prescription would have a very minor impact on one operator who controls both the Sherwin and Round Valley allotments. This operator has not used these allotments for 25 years (keeping them as back-up, allowing for flexibility in his operation) and has indicated that he does not have a need for these allotments at this time.

Conclusion:

Actions on Bureau land would result in changes to a greater number of operators and allotments, involve more acreage with a broader diversity of rangeland types, and potentially provide greater long-term benefits to operators than alternatives 1 or 2. The benefits would be slightly less than under alternative 3. A great amount of rangeland improvement would be realized under this alternative. However, this alternative would create moderate to high negative short-term impacts due to increased costs of conducting operations. Potential impacts on a regional basis would be slight to moderate.

Impact on Cultural Resources

For alternatives 1, 2, and 3, see the draft RMP/EIS, pages 202 to 205.

Alternative 4: Proposed Action

Region-wide, there will be continued slow loss of cultural properties from vandalism and projects which cannot be redesigned.

BLM's special emphasis on education and interpretation through the development of an environmental education center in Bishop, programs to work with teachers and schools, interpretive plans at appropriate historic and prehistoric sites, and interpretive displays at the InterAgency Visitor Center, will increase public awareness of cultural resource values in the eastern Sierra. This will result in long-term positive impacts on cultural resources through reduction of vandalism and illegal collection of artifacts. Specific projects and areas which will benefit under this alternative are the Bodie Hills, Mono Basin, Adobe Valley, Benton and Owens Valley areas, the historic Pat Keyes mining trail, the Golden Gate Mine, the Saline Valley Salt Tram, Dogtown, the old pack trail to Atastra Creek and the historic railroad grade from Mono Basin to Bodie.

The establishment of a curatorial facility in the Owens Valley which would meet federal standards will have a significant positive benefit on management of cultural resources in the region. Collections would be returned to the valley and students and the public would be able to study those collections in a single locale.

Implementation of an active data recovery program at threatened sites, including continuation of our existing cooperative agreement program and encouraging academic research, will have a significant beneficial effect on cultural resource management by preserving information which would otherwise be lost.

The Bodie Bowl contains historic resources of national significance (the National Historic Landmark and Bodie State Historic Park). With the primary management goal being the preservation and protection of the cultural resources within the Bodie Bowl, existing law and regulatory procedures (such as NEPA and the Section 106 process) will continue. Additionally, several decisions will result in protection of the cultural resources (both historic structures and the historic landscape) from potential damage. These include decisions to withdrawal 1,500 acres west of Bodie Bluff from mineral entry; to designate the Bodie Bowl as an Area of Critical Environmental Concern (ACEC) with the support need identified to develop "limits of acceptable change;" to manage the area to meet VRM II criteria with the objective of retaining the existing character of the landscape; and to employ full fire suppression techniques within the area around the Bodie Bowl.

Designation of the Bodie Bowl as an ACEC requires that an ACEC Plan be developed to guide management within the ACEC. Under such a plan, "limits of acceptable change" (LACs) will be developed as guidelines and criteria for any projects which might be proposed within the Bowl. Any activity, mining or otherwise, allowed in the area will be required to meet those standards. The LACs will be developed with public input, as well as technical expertise not available in this office. They will address such matters as visual standards, allowable changes to the historic landscape, levels of disturbances to historic resources and structures, noise standards, and limits to vibrations from blasting or heavy equipment. The development of standards in this manner will ensure the protection of the important cultural resources while leaving open the option for responsible mineral development or other resource management activities, as long as they can be conducted within the limits of acceptable change criteria.

Designation as an ACEC will also require that a Plan of Operations be submitted for any mining activity, including exploratory work, within the ACEC. Approval of a plan is a discretionary action, unlike a Notice of Intent.

A VRM Class II designation in the Bodie Bowl will retain the existing character of the landscape. This requires that any proposed project not attract the attention of the casual observer, and that any changes must repeat the basic elements of form, line, color, and texture of the landscape. Any activity proposed will be required to fit within this goal (as well as conforming to the LACs).

Acquisition of 1,700 acres of land at Manzanar would allow protection and interpretation of a significant historic resource which is currently deteriorating.

Acquisition of private land at Swansea would allow protection and interpretation of the historic site. This would have a moderate positive effect on those cultural resources.

Continuation of the mineral withdrawals at Dogtown and the Bishop Petroglyph Loop will have a significant beneficial effect by preventing potential problems of people filing claims and disturbing those resources with mineral exploration and development.

BLM will continue to work with local Indian communities which have expressed concerns with management of public lands which affects their communities and their efforts to continue traditional lifeways in the eastern Sierra. Decisions regarding excavation, testing and reburial will continue to be made on a case-by-case basis in consultation with the local Indian community. Access will continue to be allowed to hot springs in the Long Valley area and at Travertine. Cooperative management efforts with the local Indian community and protection of the physical setting at Travertine will have a moderate beneficial effect on its value as a sacred site, and a positive effect on efforts to maintain traditional lifeways.

Access will continue to be available for pinyon nut harvesting; and commercial harvesting of pinyon nuts will be prohibited, thus providing a positive benefit to the Indian community. However, cutting of live pinyon to meet desired plant community goals might have a slight negative effect on the amount of pinyon nuts available in an area in a given year.

Land is identified for expansion of the Indian reservations at Benton and Fort Independence.

Conclusion:

BLM's cultural resource management program will improve over the existing situation through educational and interpretive efforts. Protection of Bodie will improve through mineral withdrawal for the area west of Bodie Bluff, and ACEC designation and development of limits of acceptable change.

Attention to concerns of the local Indian communities and benefits to their traditional lifeways will improve slightly.

Region-wide, there will be continued slow loss of cultural properties from vandalism and projects which cannot be redesigned. However, the loss from vandalism is expected to decrease as people become better informed. Data retrieval at threatened sites will mitigate many of these losses.

Impacts of the East-West Transmission Line Corridor Alternatives

Introduction

The analysis of the No Action, No East-West Corridor Alternative evaluates the impact of designating no east-west corridor through the Owens Valley. The analysis of the three alternative east-west corridors focuses on major impacts to key natural resources and human health and safety. The analysis for the preferred alternative (which includes dropping the Pizona and Queen Valley areas from further consideration, and no corridor designation in Soldier Canyon, but leaving the potential for a future designation open), summarizes impacts addressed in the other alternatives, primarily the No Action alternative. The impact analyses include consideration of cumulative impacts.

No Action: No East-West Corridor Alternative

Under this alternative anticipated demand for additional electric power in southern California could not be met with energy transmitted through the Owens Valley. However, because of the existence of alternate routes and conservation measures that could be applied, demand in southern California would be satisfied.

A significant impact would be a decrease in the reliability of the electricity supply, not only for southern California, but the entire Western Interconnected Network. The technical reasons provided by the utility industry for the decrease in reliability are explained in Appendix 8. Briefly, there is so much electricity going to Los Angeles via Las Vegas and Victorville (the only other major corridor available) that a sudden disruption from fire, earthquake, lightning, flood, wind, aircraft, vandalism, or sabotage could cause system outages throughout much of the western United States. Although there is considerable electricity going through the Owens Valley now, it is only about half that going through Las Vegas. System reliability would be higher if additional increments came through the Owens Valley rather than Las Vegas.

Depending on where the lines originate, transmission line routes to Los Angeles via Las Vegas may be 150 to 200 miles longer than corridors through the Bishop Resource Area. A 500 kV transmission line costs roughly $500,000 per mile. This means that bringing a line through the Owens Valley could save utilities as much as $100 million in construction costs. However, such savings are unlikely. Energy produced in west-central Nevada can access the north-south Intertie via the Oxbow line or other points north of the California-Nevada state line. Energy sources in east-central Nevada and southern Utah are generally as close or closer to existing corridors through Las Vegas. Thus, for most potential projects the distance traversed by transmission lines would not be increased under this alternative. Costs, therefore, would not necessarily be more, and may even be less depending on the relative cost of mitigation required to reduce impacts in study corridors compared to the cost of mitigation designed to increase the reliability of a route via Las Vegas.

Under this alternative energy might have to get to Los Angeles via routes other than through the Owens Valley. It is difficult to predict the environmental impact of transmission lines without knowing their location. However, the lines would generally follow existing corridors, and, therefore, go through areas less environmentally sensitive than the study areas. It is expected that even if the routes were longer than those through the Owens Valley, the environmental impacts would be less than under the other alternatives.

Under this alternative the existing character of the Benton Range and the White and Inyo Mountains would remain intact. The visual and other resources in these areas would not be impacted.

Conclusion:

Additional demand for electrical power in southern California would have to be met using transmission corridors outside the Owens Valley. System reliability would be less and could result in major power outages in the event of a natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains would remain intact.

Pizona Corridor Area Alternative

Impact on Wild Horse Habitat

The impacts to wild horse habitats and populations would be insignificant. There could be some disturbance of mares and foals from construction activities. Tower and access road construction would eliminate some habitat, but such losses would be minimized by the road construction prohibition in Prescription 17 which covers most of the Pizona Corridor alternative area (Figure 3-11). A slight increase in use of the area from the few roads that might be constructed could displace some horses, but no measurable impact on the population is anticipated.

Conclusion:

Although there would be some disturbance to wild horses during construction and from habitat loss and increased access, impacts to the population would be insignificant.

Impact on Key Wildlife Habitats

Location of a powerline through the Prescription #17 area would eliminate fawning habitat for less that 5% of the resident deer herd. Roads permitted in the Pizona area outside Prescription 17 in conjunction with the powerline would remove less than 5% of additional resident deer fawning habitat through habitat removal and disturbance related to increased access. Pronghorn fawning habitat would be similarly impacted. The majority of the impacts to deer and pronghorn would occur on the Inyo National Forest. These impacts would result in a potential loss of a small but unknown number of deer and pronghorn.

Conclusion:

Less that 10% of the deer and pronghorn fawning areas in the corridor would be lost. This would result in a potential loss of a small but unknown number of deer and pronghorn.

Impact on Sensitive Plants

No sensitive plants have yet been identified within the area. A high potential exists for the occurrence of sensitive plant species in the Montgomery Pass portion of the area. However, powerline construction and location could be designed to avoid sensitive plants. No sensitive plant communities would be lost or seriously damaged.

Conclusion:

No measurable impacts to sensitive plants are anticipated.

Impact on Visual Resources

Except for the Montgomery Pass area, a powerline in this potential corridor could meet the visual quality objective (VQO) of partial retention as seen from key viewpoints on Inyo National Forest lands and VRM Class III on Bureau lands. Except for high points and ridges, most of the area cannot be seen from the main travel routes (i.e., U.S. Highway 6 and State Highway 120) or populated areas. Any highway-crossing in the Montgomery Pass area would not meet the retention or partial retention VQO. However, the Montgomery Pass area has been identified as the best location to cross U.S. Highway 6 to minimize the visual impacts of such a crossing. A crossing at Montgomery Pass makes a powerline visible to the highway traveller for the shortest distance and the least amount of time than any other highway crossing location.

Conclusion:

Visual quality objectives would be met from key viewpoints except for the Highway 6 crossing near Montgomery Pass.

Impact on Recreation

The location of a transmission line anywhere within the area will have significant negative impacts to its natural and undisturbed character, as well as to the semi-primitive recreation resource values and associated experiences of visitors. Even though a transmission line in this area would not be seen from key viewpoints in the valley, it would be a major intrusion on the experience of those who travel its few primitive roads to enjoy its relatively natural and undisturbed character.

Conclusion:

There would be significant negative impacts to the area's natural and undisturbed character and the associated experiences of recreationists.

Impact on Cultural Resources

This area is rich in cultural resource values. Most impacts to cultural properties could be avoided via design of a powerline's location and construction. Those sites which could not be avoided would be mitigated via data recovery. Mitigation measures would preclude construction of new roads within the area designated for semi-primitive recreation management (Prescription #17 of the Forest Plan). Mitigation measures would also require the closure of roads built for the construction/maintenance of lines in other portions of the area. Road closure would restrict access to cultural sites, lessening potential vandalism, and resulting in very few impacts to cultural properties in this area. There would be no impacts on traditional lifeways.

Conclusion:

With management prescriptions of the Forest Plan, there would be few impacts to cultural resource properties in this area. There would be no effects on traditional lifeways.

Impact on Prolonged Human Exposure to Electro-Magnetic Fields

Considerable concern was expressed during the public scoping process regarding the possibility of human health risks due to prolonged exposure to power frequency (60 hertz) electric and magnetic fields (EMF) emitted by high voltage electric transmission lines. Concern focused on certain studies and recent news broadcasts which suggest that exposure to EMF may increase the risk of cancer.

Over the last 10 years, a growing number of epidemiological studies suggest that people who live or work near electric powerlines or equipment have an increased risk of cancer. The relative risks reported in these studies are low.

There have been several scientific reviews of the biological effects of electric and magnetic fields. They typically conclude that no link has been established between EMF and adverse human health effects. However, they point out that some studies suggest the possibility for adverse effects. The need for long-term research to resolve this issue is generally acknowledged (Electrical and Biological Effects of Transmission Lines, U.S. Dept. of Energy, 1989).

Until more conclusive evidence is produced, either supporting or dismissing the link between EMF and cancer, most studies are recommending prudent avoidance of prolonged exposure to EMF whenever reasonably feasible. Furthermore, research has shown that the effects of EMF from high voltage transmission lines is insignificant at distances in excess of 300 feet from centerline.

Since there is no consensus on the health risks associated with EMF, this analysis will evaluate the degree of increase in prolonged human exposure to EMF that might be expected if a powerline were constructed through each of the corridor alternative areas. Based upon known research, that evaluation will be limited to people who live upon or regularly occupy and use lands within 300 feet on either side of transmission lines which would be constructed within each corridor alternative area.

The majority of the Pizona corridor area is either uninhabited by humans, or is so sparsely inhabited that powerlines could be located at least 300 feet from existing or potential residences. The only exception would be in the Montgomery Pass area where crossing U.S. Highway 6 would be necessary. Approximately 25 people live in that area, and it is also the site of a popular hotel/casino. Powerlines located within 300 feet of a residence or the hotel/casino in the Montgomery Pass area could increase prolonged human exposure to EMF. Otherwise, there would be no significant impact on prolonged exposure to EMF.

Depending upon occupation, appliances in the home, etc., people are exposed to varying magnetic fields for varying periods of time. Although the actual impact is unknown, it is possible that the cumulative effect of multiple exposures, including those that would result from transmission lines in this corridor, could be a threat to human health.

Conclusion:

Approximately 25 people plus the users of a hotel/casino would have increased prolonged exposure to EMF. It is not known if this would constitute a health risk for these people.

Queen Valley Corridor Area Alternative

Impact on Wild Horse Habitat

A powerline corridor within this area would have even less impact on wild horse habitat than in the Pizona area. Less than half of the Queen Valley alternative area is wild horse range (compared to all of the Pizona area). Horses do occupy those parts of the area where transmission line construction would be most likely: the Benton Range foothills and the Montgomery Pass area. Nevertheless, these areas contain fewer key watering (spring) and foaling areas than the Pizona alternative area, so impacts would be minimal.

Conclusion:

There would be less impact to wild horse habitat than under the Pizona Corridor alternative.

Impact on Key Wildlife Habitats

Crucial mule deer winter range for 60-100 deer (mostly on Bureau land) would be impacted. Impacts would take the form of direct loss of about 45 acres of winter range (12 miles of access road 30 feet wide plus towers) and displacement from some preferred winter range sites because of increased human access. These impacts could have a high physiological impact to the wintering deer. The result would be the potential loss of a small but unknown number of deer over the life of this plan. These impacts would be most severe along the base of the Benton Range. A powerline along the toe of the White Mountains would impact habitat for less than 25 deer.

The impact to pronghorn would be significantly less than on mule deer. This is due to the more dispersed use of the area by pronghorn.

Conclusion:

A small but unknown number of deer would be lost because of the loss of 45 acres of winter range and increased disturbance. Impacts on pronghorn would be negligible because their use of the area is dispersed.

Impact on Sensitive Plants

Sensitive plants have been identified on only a small portion of the area. Impacts to sensitive plants could be avoided through appropriate tower and access road location. Therefore, no sensitive plant communities would be lost or seriously damaged.

Conclusion:

No measurable impacts to sensitive plants are anticipated.

Impact on Visual Resources

Any major powerline in this area could not avoid foreground/middleground views from major portions of Highway 6. Due to the gently rolling topography and low growing vegetation, transmission lines would dominate the landscape. A powerline corridor would create long, linear modifications that could not meet the partial retention VQO or the VRM standard and serious degradation of the visual resource would occur.

Conclusion:

A powerline corridor would seriously degrade the visual resource. VQO and VRM standards would not be met.

Impact on Recreation

This area receives dispersed use, primarily from off highway vehicle touring. The area has a high occurrence of man-made improvements and facilities. Powerline road construction may increase access within the area, but overall impacts to recreational uses in this area would be minimal.

Conclusion:

Impacts to recreation would be minimal.

Impact on Cultural Resources

This area has a high number of cultural resource properties. Most impacts to cultural properties could be avoided via design of a powerline's location and construction. Those sites which could not be avoided would be mitigated via data recovery. Road construction through standard transmission line construction practices would open the area to increased site visitation and vandalism. There would be some potential increase of access to pinyon harvesting areas, and thus, potentially, a slight benefit to traditional lifeways.

Conclusion:

Impacts to cultural properties would be higher than those in the Pizona study area. There may be some slight benefit to traditional lifeways.

Impact on Prolonged Human Exposure to Electro-Magnetic Fields

While the corridor includes ranches and the communities of Montgomery Pass, Benton and Benton Hot Springs, transmission lines within this area could all be located at least 300 feet from residences and areas of common human use/occupancy. Therefore, powerline construction in this area would have insignificant impacts on prolonged human exposure to EMF.

Cumulative impacts would be the same as described for the Pizona Corridor alternative area.

Conclusion:

There would be an insignificant increase in prolonged human exposure to EMF.

Soldier Canyon Corridor Area Alternative

Impact on Key Wildlife Habitats

Location of transmission lines and associated roads in elk calving areas would remove 10-30% of the habitat, and affect up to 30 elk with calves. In addition to habitat loss, elk would be adversely affected by powerline construction and maintenance. These impacts would displace elk from preferred habitat and cause a potential loss of a small but unknown number of calves over the life of the plan.

Location of the powerline within the general area of Tinemaha Reservoir and the Owens River would subject up to 20 bald eagles (endangered species), 5-10 Ferruginous hawks (category 2), 1-3 golden eagles, and 6-14 ospreys to mortality from line strikes or similar accidents. Although we know of no reports in the literature of raptor mortality from powerline strikes, it is our judgement that such strikes would occur, probably at a rate of about 1 strike per 10 years for each of the four species mentioned above. If a transmission line project is proposed for this area, formal consultation would be initiated with the Fish and Wildlife Service to develop mitigation of possible impacts to federally listed species.

Conclusion:

Disturbances of elk during powerline construction and maintenance and the loss of habitat in calving areas would cause a loss of a small but unknown number of calves over the life of the plan. One bald eagle, one ferruginous hawk, one osprey and one golden eagle might be killed every 10 years.

Impact on Sensitive Plants

One sensitive plant species has been identified within the area and there is high potential for discovering additional populations of sensitive plant species. Impacts to sensitive plants could be avoided or lessened through appropriate tower and access road location. Therefore, no sensitive plant communities would be lost or seriously damaged.

Conclusion:

No measurable impacts to sensitive plants would be anticipated.

Impact on Visual Resources

A powerline corridor could be located within this area and meet the VQO of Partial Retention on Inyo National Forest land and VRM Class III on Bureau land, except where it crosses Waucoba Road. Any powerline would dominate the view when it crosses the wide wash adjacent to this road. It would be the only major man-made visual impact along this segment of the road.

Powerlines at the base of the Inyo Mountains would not be visible from U.S. Highway 395, State Highway 168, or Big Pine. The southern end of this corridor would be visible from U.S. Highway 395.

Conclusion:

Visual impacts from key observation points would be minimal, except where the corridor crosses the Waucoba Road.

Impact on Recreation

While access is provided by the Waucoba Road and numerous primitive routes, one of the most noticeable recreation values of this area is its relatively undisturbed, natural character. The construction of any powerline would have significant negative impacts to these recreational values, especially along a 4 mile section of the Paiute WSA (WSA CA-010-060).

Conclusion:

There would be significant negative impacts to the recreation values attached to the natural, undisturbed character of the area.

Impact on Cultural Resources

Although it has a lower site density than Pizona or Queen Valley, this area still has a high number of cultural resource properties. Most impacts to cultural properties could be avoided via design of a powerline's location and construction. Those sites which could not be avoided would be mitigated via data recovery. Road construction through standard transmission line construction practices would open the area to increased site visitation and vandalism. There would be no effects on traditional lifeways.

Conclusion:

Impacts to cultural properties would be greater than under the Pizona alternative, and about the same or slightly less than the Queen Valley alternative. There would be no effects on traditional lifeways.

Impact on Prolonged Human Exposure to Electro-Magnetic Fields

This area is mostly uninhabited, and receives little human use. There would be no significant increase in prolonged human exposure to EMF.

Cumulative effects would be the same as described for the Pizona Corridor alternative area.

Conclusion:

There would be no significant prolonged human exposure to EMF.

Proposed Action: No corridor designation; future consideration limited to Soldier Canyon

Under this alternative any additional electrical power needed in Southern California will have to use routes other than a new route through the Owens Valley, unless an in-depth study is done which shows that the impacts to resources within the Soldier Canyon area would be minor enough to allow a corridor in that area. Because of the existence of alternate routes and conservation measures that could be applied, and the continued potential for a corridor in the Soldier Canyon area, demand for electrical energy in southern California will be satisfied.

Should a future study of Soldier Canyon show it to be impractical for use as a powerline corridor, a significant impact would be a continuing decrease in the reliability of the electricity supply for southern California and the entire Western Interconnected Network.

For most potential projects the distance traversed by transmission lines would not be increased under this alternative. Costs, therefore, will not necessarily be more, and may even be less depending on what is required to study and mitigate potential impacts within the Soldier Canyon area compared to the cost of technological improvements to increase the reliability of a route via Las Vegas.

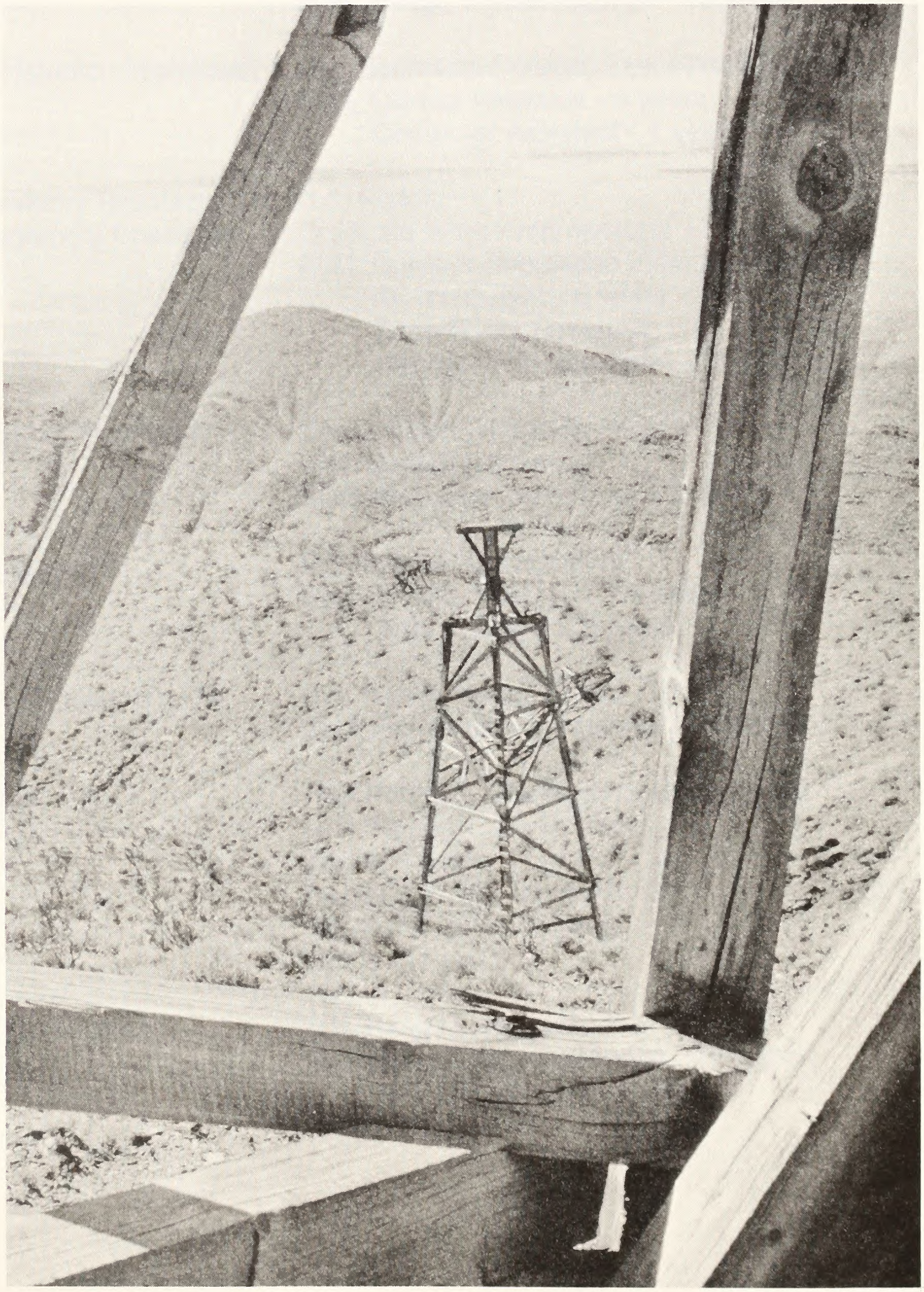
It is difficult to predict the environmental impact of transmission lines without knowing their location. However, new lines would generally follow existing corridors, and, therefore, go through areas less environmentally sensitive than the Soldier Canyon area. It is expected that even if the routes were longer, the environmental impacts would be less than another route through the Owens Valley.

Under this alternative the existing character of the Benton Range and the White and Inyo Mountains will remain intact at this time. The visual and other resources in these areas will not be impacted.

Conclusion:

The potential for a corridor designation in the Soldier Canyon area remains; but additional demand for electrical power in southern California will have to be met using transmission corridors outside the Owens Valley until an in-depth study of any potential corridor could be completed. System reliability will potentially be less and could result in major power outages in the event of a natural disaster or sabotage. The existing character of the Owens Valley and surrounding mountains will remain intact for now.

List of Preparers



Saline Valley Salt Tram.

List of Preparers

Name	Position or Specialty	Education and Experience
Holden Brink	Team Leader	PhD Wildlife Science TVA, Biologist - 4 years BLM, Biologist - 4 years Environmental Coordinator - 13 years
Tim Burke	Range Conservationist	B.S. Range Management BLM, Range Conservationist - 13 years
Jenny Cheuvront	Administration Technician	Utah Technical College, Executive Secretary BLM, Clerical Assistant - 5 years Computer Assistant - 1 year
Douglas Dodge	Supervisory Resource Management Specialist	B.A. History Graduate Work Anthropology BLM, Outdoor Recreation Planner - 7 years Archaeologist - 5 years Supervisory Resource Management Specialist - 2 years
Joy Fatooh	Biological Technician	Cooperative Education Program - Biological Sciences BLM, Biological Technician - 1 year
Mike Ferguson	Area Manager	B.S. Wildlife Management BLM, Wildlife Biologist - 14 years Area Manager - 2 years
Mark Gish	Range Conservationist	B.S. Range Management BLM, Range Conservationist - 15 years
Heather Harvey	Planner	PhD Forestry - Management/Economics M.S. Forestry - Recreation B.S. Business Private Industry - 3 years State of Virginia - 7 years USFS - 11 years
Chris Horyza	GIS Coordinator	B.S. Range Management BLM, Range Conservationist - 10 years GIS Coordinator - 3 years

Name	Position or Specialty	Education and Experience
Jim Jennings	Outdoor Recreation Planner/Off-Highway Vehicle Specialist	B.S. Forestry/Resource Economics NPS, Park Technician - 3 years Peace Corps Volunteer National Parks - El Salvador - 2 1/2 years BLM, Outdoor Recreation Planner - 12 years
Randy Karstaedt	Lands Officer	B.S. Forest Management USFS, Soil Scientist - 1 year Forester - 11 years Lands Officer - 3 years
David Lehmann	Realty Specialist	B.S. Forestry and Wildlife USFS, Recreation Technician - 3 years BLM, Recreation Planner - 7 years Natural Resource Specialist - 2 years Realty Specialist - 5 years
Eric Levy	GIS Coordinator	B.A. Anthropology BLM, Archaeologist - 15 years GIS Coordinator - 1 year
Ed Lynch	Planning and Environmental Coordinator	M.A. Botany B.A. Biology BLM, Range Management - 4 years Area Manager - 7 years Planning and Environmental Coordinator - 10 years
Larry Mercer	Public Affairs Officer	Professional Journalism BLM, Public Affairs - 3 years
Mark Milliken	Geologist	M.S. Geology Engineering Geologist - 4 years Exploration Geologist - 2 years BLM, Geologist - 10 years
Elena Misquez	Planning and Environmental Specialist	M.S. Geography BLM, Cooperative Education Student - 1 year
Steven Nelson	Wildlife Biologist/GIS Specialist	B.S. Natural Resources Management - Fisheries/Wildlife BLM, Wildlife Biologist - 4 years

Name	Position or Specialty	Education and Experience
Joe Pollini	Outdoor Recreation Planner	M.S. Outdoor Recreation Resources Management B.A. History BLM, Wilderness Specialist - 2 years Outdoor Recreation Planner - 11 years
Larry Primosch	Range Conservationist	B.S. Range Science BLM, Range Conservationist - 13 years
Ted Rickford	Landscape Architect	B.L.A - Landscape Architecture USFS - 27 years
Terry Russi	Wildlife Biologist	M.S. Biology B.S. Biology State of California, Seasonal Biologist - 3 years BLM, Wildlife Biologist - 11 years
Larry Saslaw	Wildlife Biologist	B.S. Wildlife Management BLM, Wildlife Biologist - 15 years
Cheryl Seath	Geologist	B.S. Geology Consulting Geology - 6 years BLM, Geologist - 1 year
Sylvia Stosser	Clerical Assistant	Graphic Arts - Illustration - 10 years Clerical/Computer Operator/ Language Translator - 6 years Accounting - 1 year
Gregg Wilkerson	Geologist/Mineral Examiner	PhD Geology USFS, Geologist - 2 years BLM, Geologist - 6 years
Mark Ziegenbein	Geologist	B.S. Geology Industry Geologist - 3 years BLM, Geologist - 8 years

Appendices

Rancheria Gulch.

Appendix 1
Summary of Grazing Decisions from the MFPs

This appendix portrays a summary of grazing decisions from the Management Framework Plans (MFPs) for the Benton-Owens Valley and Bodie-Coleville grazing EIS areas. It also includes a brief description of the Bureau's selective management criteria for categorizing grazing allotments on public lands.

Table 1 summarizes grazing decisions established in the MFP for the Benton-Owens Valley planning area. Table 2 shows changes to those decisions implemented to date. Table 3 summarizes grazing decisions established in the MFP for the Bodie-Coleville planning area. Table 4 shows changes to those decisions.

The Bureau's National Rangeland Management Policy established standard criteria for determining selective management categories for grazing allotments on public lands. An allotment's selective management category may change as resource conditions change or new information becomes available. These changes do not require plan amendments or RMP decisions. The goal is to have as many allotments in the Maintain (M) category as possible. Selective management categories for all allotments in the Bishop Resource Area are shown on the tables included in this appendix.

The Bureau's standard criteria for allotment categorization are presented below.

Maintain (M) Category Criteria - present range condition is satisfactory, the allotment has moderate to high resource production potential and is producing near that potential, no serious resource use conflicts or controversy exist, opportunities may exist for positive economic return from public investments, present management is accomplishing the desired results, and any other appropriate criteria.

Improve (I) Category Criteria - present range condition is unsatisfactory, the allotment has moderate to high resource production potential but is not producing near that potential, serious resource use conflicts or controversy exist, opportunities exist for positive economic return from public investments, opportunities exist to achieve the allotment's potential through changes in management, and any other appropriate criteria.

Custodial (C) Category Criteria - present range condition is not a factor, the allotment has low resource production potential and is producing near that potential, limited resource use conflicts or controversy may exist.

Table 1. Summary of Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area.

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6001 Keough[3]	C	1,029	0	29	C	Unspecified	S
6002 Black Rock[3]	C	963	0	36	H	Unspecified	S
6003 Frazier Canyon[3]	C	7,564	0	223	C,S	7/15-11/15	S
6004 Fish Slough[3]	C	1,496	0	39	C	11/1-5/31	S
6007 Volcanic Tablelands	C	34,861	4,456	1,332	S	5/1-6/15	S
6008 Round Valley Common	I	10,876	444	389	C	6/1-10/15	RR
6009 Evans	C	1,160	364	342	C,S	Unspecified	S
6010 Bishop Creek[4]		4,717	274	0			
6012 Zurich	C	8,839	240	392	C,S	11/1-4/30	S
6013 Owens Valley	C	1,582	137	48	C,S	Unspecified	S
6014 Independence	I	16,443	420	406	C	4/1-6/30	DR
6015 Sawmill Creek[3]	C	2,082	0	24	C	Unspecified	S
6016 Owens Valley Common	C	638	38	13	C,S	Unspecified	S
6017 Long Valley Common[5]		4,854	398	0	C		S
6018 Hot Creek	M	1,349	107	321	C	Unspecified	S
6019 West Crater Mtn.	M	6,540	300	331	C	12/1-6/30	S
6020 Little Round Valley	C	471	43	43	S	Unspecified	S
6021 Shannon Canyon/ Baker Creek	C	3,000	90	90	C	4/1-6/30 10/1-12/31	S
6022 Wilfred Creek	I	6,965	315	253	C	6/1-11/30	S
6023 Black Mine	C	1,658	34	47	C,S	Unspecified	S
6024 Hammil Valley	I	39,156	1,950	1,964	C	6/15-2/28@	S
6025 Marble Creek	I	18,097	871	794	C	Yearlong@	RR
6026 Mathieu	C	1,950	50	50	C,S	6/1-10/31	S
6027 Adobe Valley	I	24,043	1,241	1,636	C,S	6/15-11/15	RR
6028 Black Lake	C	885	49	24	C,S	6/1-10/31	S

Table 1. Summary of Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6030 Chalfant Valley	M	13,140	870	399	C	10/1-5/15	S
6031 Poleta	C	2,345	120	58	C,S	Unspecified	S
6032 Sherwin	I	3,071	45	97	C	6/1-10/15	RR
6033 Tinemaha	C	3,681	250	159	C,S	Unspecified	S
6034 Granite Mtn.	M	16,956	192	798	C,S	7/1-10/15	S
6035 Granite Basin[7]		3,652	300	0	C,S	7/1-8/31	S
6036 Adobe Lake	C	1,804	112	77	C,S	6/1-10/31	S
6037 Symons	C	3,134	144	93	C,S	6/1-10/31	S
6038 Bramlette	I	31,718	1,032	738	C	10/1-2/28	S
6040 Laws	C	3,065	186	56	C,S	10/1-5/15	S
6041 Jeffrey	C	4,600	261	257	C,S	10/1-5/15	S
6042 Ash Creek[8]	I	3,008	300	130	C	2/1-5/31	RR
6043 Chalk Bluff	M	12,517	593	455	C,S	10/1-5/15	S
6044 Long Valley[9]	C	2,496	100	11	C,S	Unspecified	S
6045 Tobacco Flat	C	304	40	32	C	Unspecified	S
6046 Alabama Hills	I	47,010	1,364	1,077	C	2/1-5/31	DR
6047 Red Mtn.	M	4,871	330	251	C	12/1-6/30	S
6048 West Santa Rita	C	761	47	8	C,S	Unspecified	S
6049 Aberdeen	C	4,279	224	231	C,S	12/1-5/31	S
6050 Poverty Hills	M	4,354	44	96	C	12/1-3/15 5/1-6/30	S
6051 Wells Meadow	I	1,263	152	69	C	6/1-10/15	RR
6053 Lone Tree	C	3,559	360	182	C	10/1-5/15	S
6054 Mono Lake[8]		8,536	416	0	S	7/1-8/15	S
6055 Mono Mills	M	35,932	1,907	2,812	S	7/1-10/15	S
6079 East Crater Mtn.	M	3,524	75	136	C	12/1-6/30	S

Table 1. Summary of Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6080 Blind Spring	M	5,870	0	130	C	6/15-2/28	S
6081 Casa Diablo[10]	C	2,193	0	40	C,S	Unspecified	S
6082 George Creek	C	3,160	0	183	C	4/15-6/30	S
Total	53	432,021	21,285	17,401			
Total I	11	201,650	8,134	7,553			
Total M	10	96,517	4,418	5,729			
Total C	28	112,095	7,345	3,949			
Unallotted Areas	1	4,717	274				
Allotments to be Combined	3	17,042	1,114				

[1] Estimates are derived from a weight estimate survey, and are an estimate of total available livestock forage.

[2] S=Seasonal DR=Deferred rotation RR=Rest rotation

[3] Formerly unallocated areas designated to become allotments.

[4] Allotment to be unallocated.

[5] Allotment to be combined with 6018.

[6] Ash Creek unallocated area to be incorporated for an additional 140 AUMs Active Preference and an RR grazing system developed.

[7] Allotment to be combined with 6034.

[8] Allotment to be combined with 6055.

[9] Allotment boundary to be changed by grazing decision.

[10] Formerly part of allotment 6044.

@ Grazing decision specifying stagger or restricted use on bitterbrush for deer winter range.

Table 2. Summary of Changes in Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area.

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6001 Keough	C	1,029	29	29	C	Unspecified	S
6002 Black Rock	C	963	36	36	H	Unspecified	S
6003 Frazier Canyon	C	7,564	223	223	C,S	7/15-11/15	S
6004 Fish Slough	C	1,496	39	39	C	11/1-5/31	S
6007 Volcanic Tablelands[6]	C	44,006	3,788	1,332	S	5/1-6/15	S
6008 Round Valley Common[4,8]	I	5,248	389	389	C	6/1-10/15	RR
6009 Evans[9]							
6012 Zurich[5]	C	8,839	392	392	C,S	11/1-4/30	S
6013 Owens Valley[5,8]	C	1,764	116	48	C,S	Unspecified	S
6014 Independence[7]							
6015 Sawmill Creek	C	2,082	24	24	C	Unspecified	S
6016 Owens Valley Common[5]	C	640	32	13	C,S	Unspecified	S
6018 Hot Creek[5,8]	M	6,203	445	321	C	5/15-10/31	S
6019 West Crater Mtn.[5]	M	6,540	331	331	C	12/1-6/30	S
6020 Little Round Valley[3]	C	1,118	43	43	S	Unspecified	S
6021 Shannon Canyon/ Baker Creek	C	3,000	90	90	C	4/1-6/30 10/1-12/31	S
6022 Wilfred Creek[5]	I	6,965	295	253	C	6/1-11/30	S
6023 Black Mine[5,8]	C	1,658	47	47	C	Unspecified	S
6024 Hammil Valley[3,5,6]	I	41,320	1,964	1,964	C	10/1-6/15@	S
6025 Marble Creek[5,6,8]	I	14,791	845	794	C	Yearlong@	RR
6026 Mathieu[8]	C	1,950	50	50	C	6/1-10/31	S
6027 Adobe Valley[5,8]	I	24,043	1,391	1,636	C	6/15-11/15	RR
6028 Black Lake[5]	C	885	41	24	C,S	6/1-10/31	S

Table 2. Summary of Changes in Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6030 Chalfant Valley[5,8]	M	13,140	399	399	C	10/1-6/15	S
6031 Poleta[5,8]	C	2,345	100	58	C	Unspecified	S
6032 Sherwin[4,8]	I	1,811	97	97	C	6/1-10/15	RR
6033 Tinemaha[9]	C	3,681	220	159	C	Unspecified	S
6034 Granite Mtn.[5]	M	20,608	594	798	C	7/1-10/15	S
6036 Adobe Lake[5]	C	1,804	100	77	C,S	6/1-10/31	S
6037 Symons[5]	C	3,134	127	93	C,S	6/1-10/31	S
6038 Bramlette[3,5,8,10]	I	33,308	655	738	C	10/1-5/31@	S
6040 Laws[8]	C	3,065	186	56	C	10/1-5/15	S
6041 Jeffrey[5,8]	C	4,600	257	257	C	10/1-5/15	S
6042 Ash Creek[5]	C	3,008	243	130	C	2/1-5/31	D
6043 Chalk Bluff[3,5,8]	C	15,607	555	455	C	10/1-5/15	S
6044 Long Valley[8,8]	C	303	11	11	C	Unspecified	S
6045 Tobacco Flat[3,5]	C	380	32	32	C	Unspecified	S
6046 Alabama Hills[5,8]	M	65,234	1,770	1,077	C	2/1-6/30	D
6047 Red Mtn.[5]	M	4,871	304	251	C	12/1-6/30	S
6048 West Santa Rita[5,8,8]	C	321	8	8	C	Unspecified	S
6049 Aberdeen[5,8]	C	4,279	231	231	C	12/1-5/31	S
6050 Poverty Hills[5,8]	M	4,354	78	96	C	12/1-3/15 5/1-6/15	S
6051 Wells Meadow[5,8]	I	1,263	129	69	C	4/1-10/15	RR
6053 Lone Tree[5]	C	3,559	301	182	C	10/1-5/15	S
6054 Mono Lake[3,5,8,11]	M	8,536	537	653	S	7/1-10/15	S
6055 Mono Mills[5]	M	35,932	2,142	2,812	S	7/1-10/15	S
6079 East Crater Mtn.[5]	M	3,524	136	136	C	12/1-6/30	S

Table 2. Summary of Changes in Grazing Decisions from the Management Framework Plan (MFP) for the Benton-Owens Valley EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6080 Blind Spring[5]	M	5,870	130	130	C	6/15-2/28@	S
6081 Casa Diablo[5,6,8]	C	2,193	40	40	S	Unspecified	S
6082 George Creek[5,8,8]	C	3,160	183	183	C	3/1-6/30	S
Total	50	431,994	20,183	17,306			
Total I	8	128,749	5,773	5,940			
Total M	11	174,812	6,866	7,004			
Total C	29	128,433	7,544	4,362			
Unallotted Areas	1	0	0				
Allotments Combined	1	0	0				

[1] Estimates are derived from a weight estimate survey, and are an estimate of total available livestock forage.

[2] S=Seasonal DR=Deferred rotation D=Deferred RR=Rest rotation

[3] Allotment acreage change due to incorporation of unallocated area.

[4] No grazing until AMP is implemented.

[5] Preference adjustment from that shown in Table 1.

[6] Allotment boundary change made by grazing decision, other adjustments made accordingly.

[7] Combined with allotment 6046; also season of use change.

[8] Grazing decision specifying kind of livestock, season of use or grazing system.

[9] Entire allotment or portion thereof in Mono Basin National Scenic Area; adjustments made accordingly.

[10] One permittee relinquished his permit.

[11] Allotment not incorporated.

@ Grazing decision specifying stagger or restricted use on bitterbrush for deer winter range.

Table 3. Summary of Grazing Decisions from the Management Framework Plan (MFP) for the Bodie-Coleville EIS Area.

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6066 Slinkard Valley	I	7,923	75 95	75 95	S C	5/15-5/31 5/15-10/31	S
6071 Bodie Mountain	I	46,547	5,647	3,816	C,S	6/1-10/15	RR
6072 Mono Sand Flat	I	59,188	2,514	1,550	C	12/1-5/31	RR
6073 Potato Peak	I	18,243	2,647	2,238	S	6/1-10/31	DR
Aurora Canyon[3]	I	17,832	1,245	1,051	C	6/15-9/30	RR
6057 Copper Mountain	M	2,448	324	191	C,S	6/16-10/31	DR
6058 Dog Creek	M	5,340	990	952	S	6/1-10/31	DR
6059 Rancheria Gulch	M	15,213	1,600	1,257	S	6/1-10/31	DR
6060 Dechambeau Ranch	M	9,712	600	489	S	6/1-8/15	DR
6061 Mono Settlement	M	2,625	240	201	S	6/1-10/31	DR
6062 Travertine Hills	M	8,947	740	1,193	C,S	5/17-10/31	DR
6070 Little Mormon	M	8,616	1,230	956	S	6/1-10/31	DR
6074 Mormon Ranch	M	3,358	329	226	S	7/22-10/15	DR
6075 Goat Ranch	M	1,956	164	68	S	6/1-7/20	DR
6076 Green Creek	M	3,838	550	483	S	6/1-10/31	DR
3601 Topaz (Calif.)	C	200	5	2	C	4/1-5/15	S
6056 West Reservoir	C	753	70	16	C	6/16-9/30	S
6063 Dry Canyon[4]	C	893	78	40	C	5/15-10/31	S
6064 Koenig Ranch	C	548	5	16	C,H	5/1-10/31	S
6065 Aristo Ranch	C	651	112	34	C	5/1-10/31	S
6068 Sarman Ranch	C	445	22	13	C,S,H	5/1-10/31	S
6078 Walters Ranch	C	516	54	15	S	5/1-6/30	S
3554 Larkin Lake[5]	Unallotted	295	40	0		Temporary non-renewable use only in accordance with HMP	

Table 3. Summary of Grazing Decisions from the Management Framework Plan (MFP) for the Bodie-Coleville EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
3599 Wild Oat[5]	Unallotted	1,749	219	0	S	Trailing use allowed by permit	
6067 Chichester Ranch[5]	Unallotted	280	3	0		No grazing	
6069 Little Antelope	Unallotted	5,134	0	0		No grazing	
0000 Bodie	Unallotted	1,387	0	0		Trailing use allowed by permit	
0001 East Antelope	Unallotted	3,175	0	0		Trailing use allowed by permit	
0002 West Antelope	Unallotted	477	0	0		No grazing	
Total	28	227,773	19,597	14,977			
Total I	5	149,733	12,223	8,825			
Total M	10	62,053	6,766	6,016			
Total C	6	3,490	346	136			
Unallotted Areas	7	12,497	262	0			

[1] Estimates are derived from a weight estimate survey, and are an estimate of total available livestock forage. No adjustments in existing preference levels will be made until monitoring studies and actual use data verify the need for adjustment.

[2] S=Seasonal DR=Deferred=rotation RR=Rest rotation

[3] Formerly part of allotment 6073, Potato Peak. Present preference is shown as it would be divided by the new allotment boundary.

[4] Preference will eventually be relinquished pending exchange of use with CDF&G administered state lands within allotment 6066.

[5] Cancellation of existing permits require a two-year notification prior to the cancellation or relinquishment.

Table 4. Summary of Changes in Grazing Decisions from the Management Framework Plan (MFP) for the Bodie-Coleville EIS Area.

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
6066 Slinkard Valley	No	Change					
6071 Bodie Mountain	I	46,547	5,647	3,816	C,S	6/1-10/15	D
6072 Mono Sand Flat[1]	I	52,516	2,360	1,396	C	12/1-5/31	RR
6073 Potato Peak[2]	I	13,528	1,086	1,676	C	6/1-10/31	D
6083 Aurora Canyon[6]	I	17,832	1,736	1,051	C	6/15-9/30	D
6084 Mt. Biedeman[9]	I	4,859	480	480	S	6/1-10/31	D
6057 Copper Mountain	M	2,448	324	191	C,S	6/16-10/31	S
6058 Dog Creek[3]	M	6,300	990	952	S	6/1-10/31	D
6059 Rancheria Gulch[4]	M	21,514	1,600	1,257	S	6/1-10/31	S
Dechambeau Ranch[1,5]							
6061 Mono Settlement[1]	M	758	112	73	S	6/1-10/31	D
6062 Travertine Hills[10]	M	8,467	740	1,193	C,S	5/17-10/31	D
6070 Little Mormon	M	8,616	1,230	956	S	6/1-10/31	D
6074 Mormon Ranch	M	3,358	329	226	S	7/22-10/15	D
Goat Ranch[7]							
6076 Green Creek	M	3,838	550	483	S	6/1-10/31	D
3601 Topaz (Calif.)[8]	C	200	5	2	C	4/1-5/15	S
6056 West Reservoir	No	Change					
6063 Dry Canyon	No	Change					
6064 Koenig Ranch	No	Change					
6065 Aristo Ranch	No	Change					
6068 Sarman Ranch	No	Change					
6078 Walters Ranch	No	Change					
3554 Larkin Lake	Unallotted	295	0	0		Temporary non-renewable use only in accordance with HMP	

Table 4. Summary of Changes in Grazing Decisions from the Management Framework Plan (MFP) for the Bodie-Coleville EIS Area (continued).

Allotment Number and Name	Selective Management Category	Public Land Acres	Existing AUMs of Active Preference	Estimated Livestock Forage AUMs[1]	Kind of Livestock	Season of Use	Grazing System[2]
3599 Wild Oat	Unallotted	1,749	0	0		Trailing use allowed by permit	
6067 Chichester Ranch	Unallotted	280	0	0		No grazing	
6069 Little Antelope	No	Change					
0000 Bodie	No	Change					
0001 East Antelope	No	Change					
0002 West Antelope	No	Change					
0003 Travertine ACEC Unallotted		480	0	0			
Total	29	215,487	17,700	14,056			
Total I	6	143,205	11,479	8,589			
Total M	8	55,229	5,875	5,331			
Total C	7	4,006	346	136			
Unallotted Areas	8	12,997	0	0			

[1] Portion of allotment in Mono Basin National Forest Scenic Area, adjustments made accordingly.

[2] 590 additional AUMs in suspended preference pending completion of range projects; also changed kind of livestock separated a portion for creation of allotment 6084, and change in grazing capacity due to the change in kind of livestock.

[3] Land exchange, BLM acquired 960 acres with no increase to active preference.

[4] No change in active preference after merger of allotments 6060 and 6075.

[5] Remaining BLM portion merged into allotment 6059; no active preference increase. No longer an allotment.

[6] AUM adjustment based on separation from allotment 6073.

[7] Loss of base property qualifications, allotment was merged into allotment 6059; no active preference increase. No longer an allotment.

[8] Administered by Toiyabe National Forest; majority of the allotment is in Nevada.

[9] Allotment created from portion of allotment 6073.

[10] Loss of 480 acres due to construction of Travertine Boundary Fence for Travertine ACEC.

Appendix 2
Desired Plant Community Definitions

Desired Plant Community for Jeffrey Pine in Dry Creek in the Granite Mountain Management Area and Doe Ridge in the Long Valley Management Area.

Desired plant community for Jeffrey pine: The goal is to maximize wildlife habitat diversity. Jeffrey pine (*Pinus jeffreyi*) density (% canopy/crown cover) would not be reduced from the present level. Insure an average of 1 snag tree per 5 acres with a minimum 16 inch diameter at breast height (DBH) and 30-48 feet tall. Retain in place an average of 2 uncharred class one or class two logs per 5 acres with a minimum size of 21 inch DBH and 20 feet long. Do not disturb or burn any class three, four or five logs. Leave other fallen limb slash in place on at least 25% of the area.

Desired Plant Community for Bristlecone Pine and Limber Pine in the South Inyo Management Area.

Desired plant community for the subalpine forest above 9,000 feet elevation of which the bristlecone pine (*Pinus longaeva*) is the outstanding assemblage species: The goal is to retain the current composition of plant species within the assemblage. The subalpine forest occupies approximately 1,500 acres and occurs at this single site in the resource area. Limber pine (*Pinus flexilis*) shares the overstory. Bristlecone pine would be maintained within the subalpine forest assemblage at $\geq$ 6% of plant composition over the long term. Limber pine would also represent $\geq$ 6% of plant composition over the long term. All dead and down woody material would be left in place. All snag trees (no minimum height) would be left in place.

Desired Plant Community for Sand Dunes in the Owens Lake and South Inyo Management Areas.

Desired plant community for stabilized and partially stabilized desert dunes along the periphery of Owens Lake: The goal is to insure adequate vegetative cover and microclimatic conditions for the Category 2 species *Trigonoscuta owensi*, Owens sand dune snout beetle. Dunes and accumulations would be maintained through retention of present vegetative cover which varies from scant cover of widely scattered shrubs and herbs to nearly closed shrub canopies. Plants which predominate in the dune areas and are primarily responsible for stabilization of dune hummocks are spiny saltbush (*Atriplex confertifolia)*, desert holly (*Atriplex hymenelytra*), cattle spinach (*Atriplex polycarpa)*, burro weed (*Franseria dumosa*), black greasewood (*Sarcobatus vermiculatus*), and seep weed (*Suaeda torreyana*). Maintain the current overall vegetative cover of approximately 7% in the dune habitat.

Desired Plant Community for Big Sagebrush/Low Sagebrush/Bitterbrush in the South Inyo Management Area.

Desired plant community description for the big sagebrush (*Artemisia tridentata*)/low sagebrush (*Artemisia arbuscula*)/bitterbrush (*Purshia tridentata*) vegetation type above 8,400 feet elevation: The goal is to maximize vegetative habitat characteristics for management indicator species like mule deer. For those areas with site potential, mule deer habitat characteristics will include hiding cover: vegetation at least 17 inches tall and capable of concealing 90% of a bedded adult deer at 150 feet. Patches of hiding cover would consist of shrubs offering the hiding capability on a minimum of 0.75 acres. Thermal cover requirements, generally, cannot be met for deer in this vegetation type. Fawning habitat should consist of low shrubs $\geq$ 2.0 feet with at least 40% canopy cover and minimum patch size of 0.25 acres. No characteristics are assigned for fawning site understory vegetative cover. Ratios of habitat types within deer range should provide 55% forage area, 35% hiding cover and 10% fawning habitat. Specific vegetation characteristics for forage areas will be developed in activity plans but must be consistent with the goal of this DPC. Where possible, management will seek to maximize cover and vigor of bitterbrush.

Desired Plant Community for Big Sagebrush/Bitterbrush in the Owens Valley Management Area.

Desired plant community description for the big sagebrush (*Artemisia tridentata*)/bitterbrush (*Purshia tridentata*) vegetation type: The goal is to maximize vegetative habitat characteristics for management indicator species like mule deer and tule elk. For those areas with site potential, mule deer habitat characteristics will include hiding cover: vegetation at least 24 inches tall and capable of concealing 90% of a bedded adult deer at 150 feet. Patches of hiding cover should be a minimum of 5 acres in size. Thermal cover would consist of stands of evergreen trees and/or shrubs at least 5 feet tall with a crown cover of $\geq$ 75%. Minimum stand size should be 2 acres with stand width $\geq$ 300 feet. Fawning habitat should consist of low shrubs or small trees $\geq$ 2.2 feet with at least 40% canopy cover and minimum patch size of 1 acre. Fawning site understory vegetative cover should range from 70-90% (along stream riparian and riparian - shrub ecotones). Ratios of habitat types within deer range should provide 55% forage area, 20% hiding cover, 10% thermal cover and 15% fawning habitat. Specific vegetation characteristics for forage areas will be developed in activity plans but must be consistent with the goal of this DPC. Where possible, management will seek to maximize cover and vigor of bitterbrush and perennial grasses.

Vegetation requirements of tule elk are poorly understood for the Owens Valley. However, hiding cover on Bureau lands would likely be adequate for elk where vegetation is at least 40 inches tall and capable of concealing 90% of a bedded elk at 150 feet. Patches of hiding cover should be a minimum of 5 acres in size. Characteristics for thermal cover and fawning habitat are unknown. Vegetation composition on Bureau lands should be maintained west of Highway 395 for its current value as elk forage.

Desired Plant Community for Big Sagebrush/Bitterbrush in the Benton, Granite Mountain, and Coleville Management Areas.

Desired plant community description for the big sagebrush (*Artemisia tridentata*)/bitterbrush (*Purshia tridentata*) vegetation type: The goal is to maximize vegetative habitat characteristics for management indicator species like mule deer and pronghorn. For those areas with site potential, mule deer habitat characteristics will include hiding cover: vegetation at least 24 inches tall and capable of concealing 90% of a bedded adult deer at 150 feet. Patches of hiding cover should be a minimum of 8 acres in size. Thermal cover would consist of stands of evergreen or deciduous trees and shrubs at least 5 feet tall with a crown closure of $\geq$ 75%. Minimum stand size should be 2 acres with a stand width $\geq$ 300 feet. Fawning habitat should consist of low shrubs or small trees $\geq$ 2.2 feet with at least 40% canopy cover, a minimum patch size of 1 to 5 acres, and understory vegetative cover ranging from 70-90% (only along stream riparian and riparian/shrub ecotones). Ratios of habitat types within deer range should provide 55% forage area, 20% hiding cover, 10% thermal cover and

15% fawning habitat. Specific vegetation characteristics for forage areas will be developed in activity plans but must be consistent with the goal of this DPC. In mule deer foraging areas, management will seek to maximize cover and vigor of bitterbrush where possible.

For those areas with site potential, pronghorn vegetative habitat characteristics would include 10-40% grass, 5-15% forbs and 10-45% shrubs by composition with ground cover averaging 50%. Mean vegetation height would be 15 inches. A minimum of 750-1000 lbs/acre of air dried pronghorn forage should be available following livestock turnoff.

Desired Plant Community for Big Sagebrush/Bitterbrush in the Long Valley Management Area.

Desired plant community description for the big sagebrush (*Artemisia tridentata*)/bitterbrush (*Purshia tridentata*) vegetation type: The goal is to maximize vegetative habitat characteristics for sage grouse, a management indicator species. The description applies to the various vegetative components within a 2 mile radius of a strutting ground (lek). The area up to 1 mile from a lek would be managed for 30-40% shrub canopy cover. The area from 1-2 miles from a lek would be managed for 20-50% shrub canopy cover. Within the 2 mile radius, big sagebrush and bitterbrush height would range between 12-14" over 60% of the area with a density of 1 plant for every 4-9 ft^2 and include a grasslike understory of 1 plant per 0.75 ft^2. Preference would be given to sage grouse habitat needs where mule deer and sage grouse habitat overlap.

Desired Plant Community for Big Sagebrush/Bitterbrush in the Bodie Hills and Bridgeport Valley Management Areas.

Desired plant community description for the big sagebrush (*Artemisia tridentata*)/bitterbrush (*Purshia tridentata*) or big sagebrush/bitterbrush/aspen (*Populus tremuloides*) vegetation type: The goal is to maximize vegetative habitat characteristics for management indicator species like sage grouse and mule deer. The DPC will apply to those areas identified as habitat for sage grouse and mule deer on the GIS resource maps. For sage grouse the description applies to the various components of the vegetation within 2 miles of a strutting ground (lek). Dense brushy areas up to 1 mile from a lek would be managed for 30-40% shrub canopy cover. The area from 1-2 miles from a lek would be managed for 20-50% shrub canopy cover. Within the 2 mile radius, big sagebrush and bitterbrush height would range between 12-14" over 60% of the area with a density of 1 plant for every 4-9 ft^2 and include a grasslike understory of 1 plant per 0.75 ft^2. Preference would be given to sage grouse habitat needs where mule deer and sage grouse habitat overlap. Vegetation outside the 2 mile radius of leks would be managed for near optimal mule deer habitat characteristics to include hiding cover, which would consist of large shrubs and/or trees which offer the hiding capability over a minimum of 0.75 acres, thermal cover, which would consist of saplings or shrubs at least 5 feet tall with 75% or more crown cover, a minimum patch size of 2-5 acres and 300 feet width, and fawning cover, which would consist of low shrubs or small trees from 2-6 feet tall ranging from 70-100% understory vegetative cover, under a tree overstory of approximately 50% crown cover with a minimum patch size of 1-5 acres. The proportion of hiding cover: thermal cover: fawning cover would be approximately 20%: 15%: 5% with the remainder as forage area. Due to edaphic, slope, and aspect conditions, not all habitat within the management area can provide the above vegetative parameters. Those areas which have the capability, will be managed for the described vegetative condition. Specific vegetation characteristics for forage areas will be developed in activity plans but must be consistent with the goal of this DPC. Where possible, management will seek to maximize cover and vigor of bitterbrush.

Desired Plant Community for the Old Growth Fir Community in the Coleville Management Area.

Desired plant community for the red fir (*Abies magnifica*), white fir (*Abies concolor*), Jeffrey pine (*Pinus jeffreyi*) and lodgepole pine (*Pinus murrayana*) which comprise the old growth timber stands: The goal is to maximize habitat for those wildlife species associated with the old growth timber areas and to maintain or improve the current floral characteristics of individual old growth stands. Generally, this will require retaining the current mix of tree species, size/age composition, snag density, log density, understory vegetation composition, species richness, and variety of age classes. Two or more tree species (e.g. red fir and white fir) must be present that provide a full range of tree sizes. Eight or more large (>30 inch diameter) or old (>200 years old) red firs must be present per acre. Intermediate and small size classes may have red fir, white fir or Jeffrey pine as the predominate species for a stand. The canopy would be multilayered. Conifer snags number ≥ 1 1/2 snags per acre with dimensions > 20 inch diameter and > 15 feet tall. Logs are present at ≥ 10 tons per acre with 2 pieces per acre ≥ 24 inch diameter and > 50 feet long. Minimum stand size is 1 acre due to the intact nature of other vegetation types (pinyon/juniper, aspen/shrub, aspen/willow) providing edge influence on the stands. An individual stand may have specific trees (< 100 years old) cut and left in place if a high probability exists for improving habitat conditions for a wildlife species (e.g. pine marten) poorly represented in the old growth areas or for a wildlife guild.

Desired Plant Community for the Section 22 Spring Complex and Springs and Associated Wetlands in the Owens Lake Management Area (Meadows in the Sierra Nevada region of California are wetland or semi wetlands supporting a cover of emergent hydrophytes and mesophytes and dry herbland of the subalpine zones).

Desired plant community description for the wetland vegetation type located at Section 22 springs and other springs and associated wetlands: The goal is to maximize essential habitat characteristics for migratory and resident bird species. A site in which standing or flowing water or saturated soil would be present for a portion or all of the year. The site, typically, would be dominated by a dense growth of herbaceous monocots. Foliar cover of all plant (non-invader) species on the site would be 80% or greater. At least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Native shrubs would be nonexistent in the site. Retain the natural vegetation complex in a late seral or potential natural community condition.

Desired Plant Community Description for Springs and Associated Wetlands in the Owens Valley Management Area (Meadows in the Sierra Nevada region of California are wetland or semi wetlands supporting a cover of emergent hydrophytes and mesophytes and dry herbland of the subalpine zones).

Desired plant community description for springs and associated wetlands: The goal is to maximize essential habitat characteristics for the vertebrate and invertebrate fauna using the site. A site in which standing or flowing water or saturated soil would be present for a portion or all of the year. The site, typically, would be dominated by a dense growth of herbaceous monocots. Foliar cover of all plant (non-invader) species on the site would be 80% or greater. At least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Trees such as black cottonwood (*Populus trichocarpa*) or willow (*Salix* sp.) would occasionally border or be located within the site. Native shrubs would be nonexistent or found in trace amounts in the site. Restore or retain the natural vegetation complex in a late seral or potential natural community condition.

Desired Plant Community Description for Springs and Associated Wetlands in the Benton Management Area (Meadows in the Sierra Nevada region of California are wetland or semi wetlands supporting a cover of emergent hydrophytes and mesophytes and dry herbland of the subalpine zones).

Desired plant community description for springs and associated wetlands: The goal is to maximize essential habitat characteristics for the vertebrate and invertebrate fauna using the site. A site in which standing or flowing water or saturated soil would be present for a portion or all of the year. The site, typically, would be dominated by a dense growth of herbaceous monocots. Foliar cover of all plant species on the site would be 80% or greater. At least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Trees such as black cottonwood (*Populus trichocarpa*) or willow (*Salix* sp.) would occasionally border the site. Native shrubs would be found at < 5% total plant composition in the site or be located only on the capillary fringe of the wet area. Restore or retain the natural vegetation complex in a late seral or potential natural community condition.

Desired Plant Community Description for Springs and Associated Wetlands in the Bodie Hills and Bridgeport Valley Management Areas (Meadows in the Sierra Nevada region of California are wetland or semi wetlands supporting a cover of emergent hydrophytes and mesophytes and dry herbland of the subalpine zones).

Desired plant community description for springs and associated wetlands: The goal is to maximize essential habitat characteristics for the vertebrate and invertebrate fauna using the site. A site in which standing or flowing water or saturated soil would be present for a portion or all of the year. The site, typically, would be dominated by a dense growth of herbaceous monocots. The vegetation is composed mostly of species in the following genera: *Arnica*, *Carex*, *Eleocharis*, *Hesperochiron*, *Hordeum*, *Potentilla*, *Senecio*, *Ranunculus*, and other native herbaceous plants. Shrubs like big sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), green rabbitbrush (*Chrysothamnus viscidiflorus*) and others would be found in only trace amounts in the site. Foliar cover of all plant species on the site would be 95% or greater. At least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Trees such as aspen (*Populus tremuloides*), black cottonwood (*Populus trichocarpa*) or willow (*Salix* sp.) would occasionally border the site.

Desired Plant Community Description for Springs and Associated Wetlands in the Granite Mountain and Long Valley Management Areas (Meadows in the Sierra Nevada region of California are wetland or semi wetlands supporting a cover of emergent hydrophytes and mesophytes and dry herbland of the subalpine zones).

Desired plant community description for springs and associated wetlands: The goal is to maximize essential habitat characteristics for the vertebrate and invertebrate fauna using the site. A site in which standing or flowing water or saturated soil would be present for a portion or all of the year. The site would be dominated by a dense growth of herbaceous monocots. Shrubs common to the Great Basin would be found in only trace amounts on the site. Foliar cover of all herbaceous species on the site would be 95% or greater. At least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Willow (*Salix* sp.) would occasionally border the site.

Desired Plant Community for Aspen Groves in the Coleville, Bodie Hills and Bridgeport Management Areas.

Desired plant community for aspen (*Populus tremuloides*) groves: The goal is to maximize wildlife habitat diversity. Manage aspen stands at a mid-seral or higher ecological condition with emphasis on improving the aspen age-class structure. Insure a tree size composition of 13% = 12 inches or larger diameter at breast height (DBH), 37% = 10-12 inch DBH, and 50% < 10 inch DBH. Average 3 snag trees/acre with > 10 inch DBH and > 20 feet high. Retain an average of 3 uncharred class 1 or class 2 logs per acre with a minimum size of 12 inches in diameter at the large end and at least 20 feet in length. Cover (the proportion of ground overshadowed by plants $\leq$ 5 feet in height) under the tree canopy would be maintained between 70-100%. The understory vegetative structure would be highly varied, containing at least 4 levels with many types of stem and branch structure. The understory composition is rich, containing a large number (> 14) of species. A variety of age classes in the understory vegetation would be represented.

Desired Plant Community for Riparian Vegetation at Springs in the South Inyo Management Area.

Desired plant community for riparian vegetation at springs: The goal is to maximize forage volume and the diversity of microclimatic features in the site. Ninety percent of the riparian vegetation would be composed of very wet soil adapted plants in vigorous condition. Reproduction of hydrophytes would be evident and proceeding at a rate in the under and overstory to insure maintaining current stand size. Vegetative cover in the site would be 60% or greater. The understory vegetation structure would be highly varied, containing at least 4 levels with many types of stem and branch structure. A variety of vegetation species and age classes would be represented.

Desired Plant Community for Riparian Vegetation Along Streams in the Coleville, Bodie Hills, Bridgeport Valley, Granite Mountain, Long Valley, Benton, Owens Valley and Owens Lake Management Areas.

Desired plant community for riparian vegetation along streams: The goal is to maximize forage volume and the diversity of microclimatic features in the riparian site. Additional goals are retention or improvement of streambank stability and bank morphology. Ninety percent of the site would be composed of very wet soil adapted plants in vigorous condition or by boulders and rubble which do not allow bank erosion. Vegetation overhang within 12 inches of water surface would average 5 inches. Reproduction of hydrophytes would be evident. Upland plants (shrubs) are limited largely to the riparian-upland ecotone or at the stream capillary fringe. Trees (including conifers) shrubs, sedges, rushes, and grasses combined would cover more than 90% of the stream bank away from boulders and rubble. A minimum of 70% of the stream (water column) would be shaded by vegetation. Riparian vegetation growth is vigorous for woody plants and at least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later. Reproduction of species in both the under and overstory would proceed at a rate to insure continued ground/bank cover. The understory vegetation structure would be highly varied, containing at least 4 levels with many types of stem and branch structure. A variety of vegetation species and age classes are represented.

NOTE: In the Benton Management Area, Montgomery Creek will not be included under a DPC description due to stream gradient, propensity for flash flooding and the inability to control the natural erosion within the stream channel in an economical manner. Morris Creek is also eliminated from DPC guidelines since much of the water which historically ran in the natural stream channel is now diverted into Nevada, and the remaining water (< 0.5 cfs) is now flowing in a manmade channel.

Desired Plant Community for Pinyon/Juniper in the Coleville, Bodie Hills, Granite Mountain, Benton and South Inyo Management Areas.

Desired plant community description for the pinyon (*Pinus monophylla*)/juniper (*Juniperus* sp.) vegetation type: The goal is to maximize wildlife habitat diversity with an emphasis on mule deer habitat improvement. Dense stands of pinyon or pinyon and juniper which have < 25% understory vegetative cover, a tree crown cover > 20% and an overall stocking rate > 75 trees per acre would receive priority treatment for a change in vegetation composition. The desired stocking rate would be 20 to 40 trees per acre containing an uneven aged mix of trees where at least 40% of stand composition would consist of seed trees (> 100 years old). A minimum of 1/2 of all felled trees would be left in place. Insure an average of 1 snag tree per acre (1 snag tree per 3 acres in South Inyo Management Area) with minimum dimensions of 10 inches DBH and 15 feet in height. Retain in place an average of 2 uncharred class 1 or class 2 logs per acre with minimum dimensions of 12 inch diameter at the large end and 15 feet in length. Class 3, 4 or 5 logs would not be disturbed or burned. Limb slash would be left in place or piled on tree stumps or in the interspaces where little to no shrub or tree production occurs. Invasion of annual cheatgrass (*Bromus* sp.) or other exotic weeds should not occur after stand alteration.

Appendix 3
Interim Management Guidelines for Study Rivers

Once a river segment or waterway is determined eligible and classified as wild, scenic or recreational, it must be afforded adequate interim protection until the study process is complete and a suitability or nonsuitability decision is made. In general, management prescriptions for river corridors identified for study should provide protection in the following ways:

1. **Free-flowing Values.** The free-flowing characteristics of identified river segments cannot be modified to allow stream impoundments, diversions, channelization, and/or rip-rapping (to the extent the BLM is authorized under law to prohibit such actions).

2. **River Values.** Outstandingly remarkable values of the identified river segment or area must be protected (subject to valid existing rights) and, to the extent practicable, enhanced.

3. **Classification Impacts.** Management and development of the identified river and its corridor cannot be modified, subject to valid existing rights, to the degree that its eligibility or classification would be affected (i.e., its classification cannot be changed from wild to scenic, or scenic to recreational).

The following table provides a description of classification criteria to determine whether a study river is wild, scenic or recreational. Then under each classification, it identifies specific guidelines for interim management of study rivers until a suitability or nonsuitability decision is made. Rivers recommended as suitable must be ultimately designated by Congress in order to be added to the Wild and Scenic River system.

Table 1. Guidelines for Interim Management of Study Rivers on Bureau of Land Management Lands in the Bishop Resource Area.

General Guidance

The Wild and Scenic Rivers Act provides some guidance as to how study rivers would be managed until designated suitable by Congress or released to multiple use. It states, "Each component of the National Wild and Scenic Rivers System shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, on the special attributes of the area." Sec. 10(a) P.L. 90-542 Wild & Scenic Rivers Act.

	Wild River Classification	**Scenic River Classification**	**Recreational River Classification**
Classification Description	Wild river areas are defined by the Act to include "Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America." Management of wild river areas should give primary emphasis to protecting the values which make it outstandingly remarkable while providing river related outdoor recreation opportunities in a primitive setting.	Scenic river areas are defined by the Act to be "Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads." Management of scenic river areas should maintain and provide outdoor recreation opportunities in a near-natural setting. The basic distinctions between a "wild" and "scenic" river area are the degree of development, types of land use, and road accessibility. In general, a wide range of agricultural, water management, silvicultural and other practices could be compatible with scenic river values, providing such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment.	Recreational river areas are defined by the Act to be "Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past." Management of recreational river areas should be designed to protect and enhance existing recreational values. The primary objective will be to provide opportunities for the public to participate in recreation activities dependent on or enhanced by the largely free-flowing nature of the river.

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Forestry Practices	Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and for visitor safety) or to protect the environment (such as control of fire). Timber outside the boundary but within the visual corridors will be managed and harvested in a manner to provide special emphasis on visual quality.	Forestry practices including timber harvesting could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual area should be managed and harvested in a manner which provides special emphasis on visual quality.	Forestry practices including timber harvesting would be allowed under standard restrictions to protect the river environment and its associated values.
Agricultural Practices and Livestock Grazing	Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited.	A wider range of agricultural and livestock grazing uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion on the "largely primitive" nature of scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.	Lands may be managed for a full range of agricultural and livestock grazing use to the extent currently practiced.
Recreation Facilities	Major public use areas, such as large campgrounds, interpretive centers or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as toilets, tables, fireplaces, shelters or refuse containers may be provided as necessary within the river area. These should harmonize with the surroundings. Unobtrusive hiking and	Larger scale public use facilities such as moderate size campgrounds, interpretive centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed.	Interpretive centers, administrative headquarters, campgrounds, and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Recreation Facilities (continued)	horseback riding trail bridges could be allowed on tributaries, but would not normally cross the designated river.		
Public Use and Access	Recreation use including but not limited to hiking, fishing, hunting, and boating is encouraged in river areas to the extent consistent with the protection of the river environment and outstandingly remarkable values. Public use and access may be regulated and distributed where necessary to protect and enhance river values.	This is the same as for wild river classification.	This is the same as for wild river classification.
Motorized Travel	Motorized travel on land or water could be permitted, but is generally not compatible with this classification. Normally, motorized use will be prohibited in a wild river area. Prescriptions for management of motorized use may allow for search and rescue and other emergency situations.	Motorized travel on land or water may be permitted, prohibited, or restricted to protect the river values. Prescriptions for management of motorized use may allow for search and rescue and other emergency situations.	Motorized travel on land will generally be permitted on existing roads. Controls will usually be similar to that of surrounding lands. Motorized travel on water will be in accordance with existing regulations or restrictions.
Rights-of-Way and Utilities	New transmission lines, natural gas lines, water lines, etc., are discouraged unless specifically prohibited outright by other plans, orders, or laws. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are unavailable, locations and construction techniques will be selected to minimize	This is the same as for wild river classification.	This is the same as for wild river classification.

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Rights-of-Way and Utilities (continued)	adverse effects on river area related values and fully evaluated during the site selection process.		
Road and Trail Construction	No new roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley, or if the river valley is broad, within 1/4 mile of the river band. A few inconspicuous roads leading to the boundary of the river area and unobtrusive trail bridges may be permitted. New trails may be constructed provided that they do not detract from the essentially primitive character of the area.	Roads may occasionally bridge the river area, and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Maintenance of existing roads and any new roads will be based on the type of use for which the roads are constructed and the type of use that will occur in the river area. New trails may be constructed to enhance the values for which the river was designated.	Parallel roads or railroads could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points. New trails may be constructed as long as there is no conflict with other river values.
Minerals	Subject to existing regulations (e.g., 36 CFR 228 and 43 CFR 3809) and any future regulations that the Secretaries of Agriculture and Interior may prescribe to protect rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution,and visual impairment. Reasonable mining claim and mineral lease access will be permitted. Mining claims beyond 1/4 mile of the river, but within the wild river area boundary, and	Subject to existing regulations (e.g., 36 CFR 228 and 43 CFR 3809) and any future regulations that the Secretaries of Agriculture and Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment. Reasonable mining claim and mineral lease access will be permitted. Mining claims perfected after the effective date of the scenic river	Subject to existing regulations (e.g., 36 CFR 228 and 43 CFR 3809) and any future regulations that the Secretaries of Agriculture and Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment. Reasonable mining claim and mineral lease access will be permitted. Mining claims perfected after the effective date of the recreation river

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Minerals (continued)	perfected after the effective date of the wild river designation can be patented only as to the mineral estate and not the surface estate.	designation can be patented only as to the mineral estate and not the surface estate.	designation can be patented only as to the mineral estate and not the surface estate.
Water Quality	Water quality will be maintained or improved to meet Federal criteria or Federally approved state standards. River management plans shall prescribe a process for monitoring water quality on a continuing basis.	This is the same as for wild river classification.	This is the same as for wild river classification.
Water Supply	Water supply dams and major diversions are prohibited.	Water supply dams and major diversions are prohibited. Maintenance of existing facilities and construction of some minor new diversion structures would be permitted provided that the area remains natural in appearance and the practices or structures harmonize with the surrounding environment.	New major water structures are prohibited. Existing low dams, diversion works, rip rap and other minor structures may be maintained provided the waterway remains generally natural in appearance. New minor diversion structures or management practices, e.g., water bars, diversion ditches, etc. may be allowed provided that the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
Flood Control	No new flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river must be maintained.	Flood control dams and levees are prohibited. Existing structures protecting major improvements, homes, bridges, highways, etc., may be maintained.	Existing flood control and protection works may be maintained. New structures to provide bank stabilization such as rock or log placement, must not affect free-flowing characteristics nor conflict with outstandingly remarkable values. In addition, new structures must be compatible with the classification and the

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Flood Control (continued)			area must remain natural in appearance with structures harmonizing with the environment.
Hydroelectric Power	No development of hydroelectric power facilities would be permitted.	This is the same as for wild river classification.	This is the same as for wild river classification.
Ground Water	Federal agency groundwater development for range, wildlife, recreation, or administrative facilities may be permitted if there are no adverse affects on outstandingly remarkable values.	This is the same as for wild river classification.	This is the same as for wild river classification.
Fire Protection and Suppression	Management and suppression of fires within a designated river area will be carried out in a manner compatible with contiguous Federal lands. On wildfires, methods will be utilized that minimize suppression activities that cause long term impacts on the river and river area. Presuppression and prevention activities will be conducted in a manner which reflects management objectives for the specific river segment. Prescribed fire may be utilized to maintain or restore ecological condition or to meet objectives specified in the river management plan.	This is the same as for wild river classification.	This is the same as for wild river classification.
Insects, Disease and Noxious Weeds	The control of forest and rangeland pests, diseases and noxious weed infestations will be carried	This is the same as for wild river classification.	This is the same as for wild river classification.

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Insects, Disease and Noxious Weeds	out in a manner compatible with the intent of the Act and management objectives of contiguous Federal lands.		
Cultural Resources	Historic and prehistoric resource sites will be identified, evaluated, and protected in a manner compatible with the management objectives of the river and in accordance with applicable regulations and policies. Where appropriate, historic or prehistoric sites will be stabilized, enhanced, and interpreted.	This is the same as for wild river classification.	This is the same as for wild river classification.
Fish and Wildlife Habitat Improvement	The construction and maintenance of minor structures for protection, conservation, rehabilitation, or enhancement of fish and wildlife habitat are acceptable in wild river areas provided they do not affect the free-flowing characteristics of the river, nor conflict with outstandingly remarkable values. In addition, structures and practices should be compatible with the classification, assure the area remains natural in appearance, and harmonize with the surrounding environment.	This is the same as for wild river classification.	This is the same as for wild river classification.
Wilderness and Wilderness Study Areas	Management of river areas which overlap designated wilderness or wilderness study areas will meet whichever standard is highest. If an area is released from wilderness study area status and the	This is the same as for wild river classification.	This is the same as for wild river classification.

Table 1. (continued)

Land Use Activities	Wild River Classification	Scenic River Classification	Recreational River Classification
Wilderness and Wilderness Study Areas (continued)	associated interim management policy, the applicable river classification guidelines and standards would then apply.		
Visual Resources	Preservation of existing landscape character through natural ecological change is the objective. Limited management activities are not precluded, provided any change to the characteristic landscape is low and does not attract attention.	Retention of the existing landscape character is the objective. Management activities can occur, provided the change to the characteristic landscape is low and does not attract the attention of the casual observer.	Partial retention of the existing landscape character is the objective. Management activities can occur, provided the change to the characteristic landscape is no more than moderate and does not dominate the view of the casual observer.

Appendix 4
Visual Resource Management Class Objective Descriptions

Class I Objective. The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

Class II Objective. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen from key observation points, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention from key observation points but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV Objective. The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view from key observation points and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Appendix 5
Limits of Acceptable Change

Limits of Acceptable Change (LAC) is a framework for establishing acceptable and appropriate resource conditions in recreation settings. The primary emphasis is on conditions desired in an area rather than how much use or activity an area can tolerate. It has been traditionally used in wilderness areas and on wild and scenic rivers to manage resource and social conditions. It can be applied to other recreation settings, such as historic sites, as well.

Since acceptable change is a matter of personal judgement, it necessarily entails viewpoints of managers, researchers, and citizens. This public process will be addressed at the activity plan level.

The overall direction and prescriptions for the Bodie Bowl ACEC are located in Chapter 2. In order to establish Limits of Acceptable Change (LAC) for the Bodie Bowl, it is necessary to consider a number of interrelated management components. These components involve identification of issues, selection of resource and social indicators, a resource inventory, development of resource standards, identification of alternative management actions, selection of a preferred alternative, implementation and monitoring. As an example of LAC, a decision may be adopted that noise which is an indicator of the Bodie Bowl's historic context would not exceed an established threshold during seasons of heavy visitation. Regular monitoring of noise levels would be conducted to insure conformance with the noise standard.

This management approach will be based on "Limits of Acceptable Change for Wilderness Planning" - a research paper authored by George Stankey, David Cole, Robert Lucas, and others.

Appendix 6
Errata

This appendix shows corrections and revisions to portions of the draft RMP/EIS which were not included in the final document.

Chapter 1

Page 13, Table S-1, Alternative 3, Wildlife, last sentence

Delete: "except for the sagebrush-bitterbrush type which would slightly decrease due to various developments."

Chapter 2

Maps: Special Management Areas

For Alternatives 1-4, the maps entitled Special Management Areas identified the Poleta Canyon OHV Area but failed to note that all other public lands were limited to designated roads and trails. These maps have been adjusted to match the vehicle use designations narrative in the draft RMP. The "Off-Highway Vehicle Designations Map" is in Chapter 2 of the final RMP, figures 2-1 and 2-2.

Page 40, first paragraph

Delete: "Some seasonal closures will be designated in the resource area."

Pages 41 - 53, Figures 2-1 through 2-8

For Alternatives 1-4, Figures 2-1 through 2-8 depict the VRM classes for the resource area. Some of the maps displayed the VRM classes incorrectly, conflicting with the narrative VRM descriptions in the management areas. These maps have been corrected to match the narrative descriptions in the draft RMP. A corrected Alternative 4 map has been included in the final RMP.

Page 43, second paragraph

Delete: "Some seasonal closures will be designated in the resource area."

Page 54, first column, third Support Need

Replace entire sentence with: "Develop a Habitat Management Plan for the West Walker deer herd in coordination with CDF&G and Toiyabe National Forest."

Page 56, second column, fourth statement

Replace: "the unnamed creek along Golden Gate Mine Road" *with* "Rodriguez Creek"

Page 57, first column, fifth Support Need

Replace entire sentence with: "Develop a Habitat Management Plan for the West Walker deer herd in coordination with CDF&G and Toiyabe National Forest."

Page 67, Alternative 1, sixth decision

Replace: "Provide" *with* "Manage"

Page 67, Alternative 2, third decision

Replace: "Provide" *with* "Manage"

Page 68, second column, sixth decision

Replace: "Provide" *with* "Manage"

Page 70, first column, sixth decision

Replace: "Provide" *with* "Manage"

Page 71, Long Valley Management Area, Alternative 1 Decisions, third statement

Delete statement: "Close the Hot Creek access road..."

Page 74, Support Needs, first statement

Delete statement: "Coordinate vehicle use management..."

Page 79, fifth statement

Delete statement: "Close the Horton Creek campground..."

Page 82, third paragraph, VRM standards

Under Alternative 4, the VRM II prescription for the Alabama Hills applies to the entire Special Recreation Management Area (SRMA). The narrative in the final RMP, and the VRM map for Alternative 4, have been modified to reflect this.

Page 84, South Inyo Management Area - Alternative 3, Decisions, VRM Standards

Replace: "VRM II - Proposed Wilderness area" *with* "VRM I - Proposed Wilderness Area"

Replace: "VRM II - Nonsuitable WSAs" *with* "VRM II - The foothills of the Inyo Mountains and that portion of the Inyo Range south of Swansea"

Add: to VRM III - "including lands around Cerro Gordo"

Page 93, Table 2-2, Wildlife, Alternative 4, last sentence

Replace: "through diversion of up to 5% stream flow." *with* "over 20 years. Would be partially offset by riparian quality improvement on 8 acres."

Page 101, Table 2-2, Wildlife, Alternative 4, tenth sentence

Replace entire sentence: "Up to 11%...." *with* "Diversion of up to 5% of the natural flow from any stream or spring could remove from 5-11% of riparian vegetation within 10 years."

Chapter 3

Page 117, Visual Resources, following third paragraph

Add: "Over the past decade there has been an increase in public awareness and concern over environmental issues, including an increased public sensitivity to impairment of scenic landscapes. Recent social surveys; renewed interest in the environmental movement such as Earth Day, recycling, etc.; and global environmental concerns reflect growing American attitudes to support increased protection of public resources.

Page 117, Vehicle Use, first paragraph, last sentence

Delete: "Seasonal closures are designated for some areas in the Owens Valley and Benton Valley areas."

Page 117, Vehicle Use, third paragraph, first sentence

Replace: "on Bureau lands" *with* "roaded areas on Bureau lands"

Page 118, Recreational Opportunities, first paragraph, fourth sentence

Add: "hiking"

Page 120, Bodie Bowl Special Recreation Management Area, first paragraph

Replace: "7,200 acres" *with* "5,935 acres"

Page 120, Bodie Bowl Special Recreation Management Area, last paragraph

Replace entire paragraph with: "A major issue that has been identified is potential development of a gold mine near Bodie Bluff. The overall management objectives of the area may conflict with a future mining operation. Visitor use in the Bodie area is currently increasing but may be affected by future mining operations."

Page 121, Mule Deer, third paragraph

Add after third sentence: "Bitterbrush condition on most winter range areas is characterized by plants in the mature or decadent age class with no or very little occurrence of seedling or young plants. The amount and timing of precipitation is the primary influence on bitterbrush leader growth. Based on previous years' information on bitterbrush form class, approximately 85% of the plants receive moderate to heavy hedging from deer or a combination of deer, elk and livestock."

Page 128, Candidate Species

Add the following:

The mountain beaver is known to occur within 2 management areas on Bureau land. The sites the species occupies are characterized by flowing water next to either meadows or dense riparian thickets which have not been noticeably disturbed by human use. A 1988 survey indicated very few animals in any population; 4-6 animals was the highest estimate for any population. The habitat for all populations appears secure from human interference at this time except for the one population in the Bodie Hills management area.

The Inyo Mountains slender salamander is known from several locations on the western aspect of this mountain range on Bureau land. Slender salamanders occupy moist sites, usually in steep to moderately sloping drainages. Habitat is characterized by riparian vegetation with some amount of woody or leaf debris occasionally intermixed with rocky rubble or fractures in the rock substrate, all of which provide hiding cover. The known populations are not in danger of habitat disturbance from human-induced impacts.

The ferruginous hawk is a winter visitor to the resource area. Very little is known regarding this species' use of the open country alluvial fans along the western aspect of the White Mountains, Benton Valley, Round Valley and Volcanic Tableland. Occasional observations are made in these areas. Nesting is not known to occur in the resource area.

The western snowy plover is a spring and summer resident on Bureau land in Owens Lake and possibly Granite Mountain management areas. The snowy plover nests on Bureau land on the periphery of Owens Lake. Nests sites usually occur on the unvegetated alkali flats peripheral to the dry lake. The most recent formal survey (1978) for the snowy plover at Owens Lake recorded 21 nests with a later survey recording 35 broods of 1-3 chicks per brood. Other land uses around the dry lake are not known to impact snowy plover habitat. The 1978 survey indicates that natural predators, such as ravens, California gulls and coyotes, may have a substantial effect on egg loss.

The wolverine occasionally occurs on Bureau land in the Bridgeport management area. Records of the species in the Sierra indicate a broad geographic distribution. The animal's habits are poorly understood. The limited information available indicates that the wolverine may prefer to utilize riparian zones in the Bridgeport management area. Additional habitat use information will be difficult to obtain.

The Mt. Lyell salamander is known from two locations in the Owens Valley management area. The general habitat characteristics for this species are similar to those of the Inyo Mountains slender salamander. Based on recent survey information the two populations are in no danger of habitat impact from human land use.

The Travertine band-thigh diving beetle has been recorded at four sites within the resource area. Two of the four localities are on private land, according to current survey information. The species is apparently associated with thermal water sources and may be tolerant of a range of temperatures. With the ability to fly, the beetle could occur in other suitable aquatic areas. Little is known of the life cycle or habits of this species. Diverting or changing the rate of flow from thermal springs, which would affect runoff pools, would be detrimental to habitat for the beetle. Hot tub construction, livestock grazing and human foot traffic are the current threats to habitat quality where the species occurs.

The Owens Valley California vole is typically associated with meadows or stream side riparian vegetation. This rodent has been recorded from two localities in the resource area, both sites apparently on Bureau land. Although an extensive small mammal survey was conducted as part of the Bishop Resource Area inventory in 1978, the habitat normally occupied by the species was not sampled. The two sites of historic recordation have not been resurveyed recently. Little information on habitat quality for the vole is available.

California bighorn sheep occur on Bureau land during the winter period when above normal snow levels force the animals to lower elevations on the eastern Sierra front. The species occasionally is found on Bureau land within the range of the Mt. Langley, Mt. Williamson and Wheeler Crest populations. The maximum number of bighorn sheep occurring on Bureau land would not likely exceed 30-35 at each location. The current land uses in these areas are not known to be detrimental to habitat quality for bighorn sheep.

The Pacific western big-eared bat is a year-round resident in at least 3 management areas. This species utilizes caves and some man-made tunnels as day roosting sites and over winter hibernacula. Populations at some roosting sites are in excess of 150 bats. Most individual populations number between 10-30. Based on current information, overwintering big-eared bats occupy fewer locations and in lower numbers than recorded during summer. In some tunnels occupied by this animal there is high potential for disturbance or loss of populations from human casual use.

The Owens Lake and western extreme of the South Inyo management areas provide habitat for the Owens sand dune snout beetle. Sand dunes along the southeast and northeast sides of the dry lake are known locations for this weevil. Other suitable habitat possibly occurs along the northwest margin of the old shoreline. Numerical information regarding seasonal occurrence, abundance and distribution is lacking in resource area files but may be known to entomologists particularly concerned with this insect. The weevil typically lives on sand dune plants. The effects of human related land uses in this area on weevil populations or habitat availability is unknown. Elimination or alteration of aeolian sand deposits through vegetation disturbance or other actions would be expected to affect weevil distribution.

The Sierra Nevada red fox has been recorded from the Bridgeport and Bodie Hills management areas. Sightings of this species are infrequent and no intensive survey efforts have been conducted in those general areas. Status of the species on Bureau lands is unknown.

Page 128, Other Species of Management Concern, after last paragraph

Add: "The Nelson bighorn sheep is occasionally found within the Benton management area near the base of the White Mountains between Falls Canyon and Lone Tree Canyon. This animal can be seen on Bureau land when heavy snowfall has occurred at higher elevations or when spring forage is more available at low elevations. Bighorn sheep presence on the lower elevation sites is highly variable from year to year and not predictable. Habitat quality in or near some major drainages has been diminished from activities such as mining and stream diversion. Affects of these actions on bighorn sheep habitat use is unknown."

Page 129, second column, seventh paragraph, third sentence

Replace: "initiates" *with* "contributes to"

Page 132, Vegetation, fourth paragraph

Replace: "good" *with* "high seral"

Delete: ", with key forage species making up a significant portion of the plan community. Plant cover is adequate to maintain site stability."

Page 132, Vegetation, fifth paragraph

Replace: "fair" *with* "mid seral"

Delete: ", but in quantities lower than the site's potential. Most fair condition ranges have reduced plant cover, but due to rapid soil permeability and low precipitation levels, are stable."

Page 132, Vegetation, sixth paragraph

Replace: "poor" *with* "low seral"

Delete: "Key forage species, if present at all, are unavailable to grazing animals. Total productivity of the site may be far below potential. Plant cover is much reduced."

Page 133, Table 3-4, Long Valley Area

Add: Little Alkali Creek, .25 miles on BLM, occupied by Owens Speckled Dace (SD)

Page 134, Table 3-6, Acres for the Mixed desert shrub Habitat Type

Replace: "11,584" *with* "111,584"

Page 134, Table 3-6, Acres for the Subalpine sagebrush Habitat Type

Replace: "1,260" *with* "2,925"

Page 134, Table 3-6, Habitat Type and Acres

Add: Subalpine forest 1,260

Page 134, Table 3-7, Benton-Owens Valley EIS area

Replace: "199,730 acres" *with* "197,979 acres"

Replace: "265,053 acres" *with* "264,968 acres"

Page 134, Table 3-7

Replace: "good" *with* "high seral"

Replace: "fair" *with* "mid seral"

Replace: " poor" *with* "low seral"

Page 135, Old Growth Coniferous Forest

Add a third paragraph: "Jeffrey pine, as a separate old growth (mature) forest type, occurs in three general locations in the resource area. Drainages along the west side of Slinkard Valley, Dry Creek in the Mono Basin, and Doe Ridge in Long Valley provide limited amounts of a high quality Jeffrey pine community. Each stand has received little to no disturbance (removal) of the large tree component for over 100 years."

Page 136, Threatened and Endangered Plants, after second paragraph

Add the following:

Bridgeport Management Area

There are two sensitive plant species in this management area. There is one population of *Cusickiella quadricostata* (USFWS Category 2) located near Travertine Hot Springs. This population is within the fenced area of the Hot Springs and is not being impacted. The other species is *Eriogonum ampullaceum* (USFWS Category 2) and is located along Bridgeport Reservoir. This population is being monitored and is not being impacted.

Benton Management Area

There are four sensitive plant species in this management area. There are two populations of *Eriogonum ampullaceum* (USFWS Category 2) near Benton. Status of these populations is unknown. There is a potential impact from vehicles due to close proximity to Benton. There is one population of *Dedeckera eurekensis* (CDF&G Rare) in Coldwater Canyon. Population is not being impacted; there is a potential impact from vehicle use. There are four populations of *Calochortus excavatus* (USFWS Category 2) located in Fish Slough, and another population east of Chalfant Valley. Some of the populations in Fish Slough are receiving grazing impacts from livestock drifting off adjacent LADWP land (public land in this area is unallocated). One population is within the BLM exclosure constructed in 1979 for sensitive plant protection. The status of the population in Chalfant Valley is unknown. There are four populations of *Astragalus lentiginosus piscinensis* (USFWS Category 1, CDF&G Endangered) located in Fish Slough. One population is within the BLM exclosure and one population is being monitored. Some of the populations are receiving grazing impacts from livestock drifting off adjacent LADWP land. The monitored population, which is being grazed, is not being adversely impacted. In 1979 an exclosure was constructed to protect these sensitive plant species.

Owens Valley Management Area

There are three sensitive plant species in this management area. There is one population of *Dedeckera eurekensis* (CDF&G Rare) located in a canyon north of Poleta Canyon. This population is being monitored and is not being impacted. Potential impact from vehicle use exists. There are five populations of *Calochortus excavatus* (USFWS Category 2) and five populations of *Sidalcea covillei* (USFWS Category 2, CDF&G Endangered) located throughout the area and normally existing together. The populations are near Wilkerson, Independence, Lone Pine, and Alabama Hills. The populations near Wilkerson are being monitored and are in excellent condition. The status of the remaining populations is unknown. Potential impacts are livestock grazing, vehicles, and mineral development. A population of *Oryctes nevadensis* (USFWS Category 2) is located on USFS land but has not been located on public in this Management Area.

South Inyo Management Area

There are two populations of sensitive plant species in this management area. One population of *Eriogonum eremicola* (USFWS Category 2) is located near Mexican Springs on the crest, and one population of *Perityle inyoensis* (USFWS Category 2) is located south of Cerro Gordo Springs on the crest. Recent inventories have not found these populations. Status of these populations are unknown. Potential impacts would be from mineral development. Two populations of *Caulostramina jaegerianus* (USFWS Category 2) were found on the east slope of the Inyo Mountains prior to 1945. A recent inventory of the west slope did not locate this species.

Page 136, Minerals, second paragraph

Add to end: "Bonds and reclamation plans are required for all Plans of Operations."

Page 136, Minerals, third paragraph

Add: "4) Reclamation Costs"
"5) Bonding Requirements under Plans of Operations"

Page 136, last paragraph on page, second sentence

Replace: "Only 3%" *with* "A few"

Page 137, second paragraph

Replace entire paragraph with: "The Bishop Resource Area has mapped 52,501 acres as high mineral potential and 87,850 acres as moderate mineral potential. The remaining 609,649 acres is low mineral potential and was not mapped or discussed separately. Mineral potential data was derived from best available resources and office files. Data and maps compiled are entered in the area office GIS system."

Page 137, Locatable Minerals, first paragraph, fifth sentence

Delete: ", with a plan of operations for a large open pit gold mine and mill site anticipated by BLM"

Page 137, Locatable Minerals, first paragraph, last sentence

Replace: "serosity" *with* "serite"

Page 137, Table 3-8, Potentially Valuable column, Benton Management Area

Replace: "Euclite" *with* "Andralucite";

Replace: "Serosity" *with* "Serite"

Page 148, ninth paragraph

Delete: Entire paragraph "Habitat for four ...."

Page 149, Bodie Hills, left column

Add as the second paragraph: "Located within the Bodie Hills is the Bodie National Historic Landmark, one of only two national historic landmarks on Bureau land in California. The site was formally designated as eligible for landmark status in 1961 by the Secretary of the Interior. Bodie is one of the best preserved gold mining "ghost" towns in the West. Gold was first discovered in Bodie in 1859, and production peaked in 1877-1881. Two major fires occurred in the 1890s which destroyed the town's commercial district. The town was rebuilt, and mining continued on a smaller scale until World War II brought an end to the historic mining era."

Page 149, Bodie Hills, third paragraph, last sentence

Replace: "The allotments" *with* "The Goat Ranch and Dechambeau allotments"

Page 151, Granite Mountain

Add a paragraph: "Some formations, referred to as thinolite tufa, are known to exist immediately north of Highway 167 between Wilson Creek and Highway 395. These formations are the oldest exposed formations in the Mono Basin, a product of ancient Lake Russell".

Page 153, first paragraph, sixth sentence

Replace: "Livestock, wildlife, and wild horses" *with* "Livestock and wildlife"

Page 153, second paragraph

Replace: "and livestock grazing have" *with* "has"

Page 153, last paragraph, second sentence

Replace: "Aston" *with* "ASJOH"

Page 155, Benton, second paragraph, fourth sentence

Add: "hiking"

Page 157, following first paragraph

Add: "The area has incurred some minor degradation in the past from material site development, trash accumulation, and associated vandalism. There is strong public interest in maintaining the area's semi-primitive physical setting and recreation opportunities. Existing route systems have been reviewed in the High Desert OHV Study, with many dead end routes proposed for closure. The remaining routes receive casual use and will remain open. One short single track access route is proposed in the OHV study. A site specific environmental analysis will be conducted for the route."

Page 160, South Inyo, first paragraph, second sentence

Replace: "27,420" *with* "28,200"

Chapter 4

Page 178, second column, second paragraph, fourth sentence

Delete: "(less than 188,000 visitors)"

Page 180, Recreation Use and Development, second paragraph, first sentence

Delete: "(less than 188,000 visitors)"

Page 181, Impact on Visual Resources

Delete last two sentences ("Minerals development....) of second paragraph
Replace fourth paragraph with the following:

Some slight to moderate localized benefits to visual resources would occur from private land acquisitions, especially in the Coleville Management Area; wildlife habitat management which would maintain uniform vegetative cover; and a management emphasis to protect geologic values in the Alabama Hills SRMA. Route designations would provide additional benefits by mitigating unacceptable road scars in areas violating the VRM standard, especially in the Bridgeport, Long Valley, Bodie Hills, and Owens Valley Management Areas.

Future developments on 10,400 acres of Bureau land disposals would have the greatest visual impacts in the Benton, Owens Lake, and South Inyo Management Areas.

In general, greater visual impacts would be allowed to occur on 74% (553,500 acres) of the resource area classified as VRM Class III and IV. The remaining 26% (196,500 acres), classified as VRM Class I and II, would allow less visual contrasts due to stricter development restrictions. Locatable mineral development could adversely affect localized viewsheds at specific locations of high or moderate mineral potential in the resource area. New transmission lines in the existing utility corridor of the Long Valley, Benton, and Owens Valley Management Areas would adversely affect visual values on about 6 miles of viewsheds."

Page 182, column 1, second paragraph, second sentence

Replace: "extreme" *with* "moderate"

Page 182, Alternative 2, first paragraph

Add after "VRM III": "(542,000 acres)"

Add after "VRM IV": "(156,000 acres)"

Delete: last sentence, "As described in...."

Page 182, Alternative 2, third paragraph

Replace: last sentence, "Some slight benefits...." *with* "Although route designations would benefit visual values by mitigating unacceptable road scars in areas with higher VRM standards such as the Bodie Bowl and the Alabama Hills, the less restrictive VRM classes throughout much of the resource area would result in fewer overall mitigations to roads which visually contrast with the surrounding landscape."

Page 182, Alternative 2, Conclusion, last sentence

Add: "designated as VRM Class IV."

Page 182, Alternative 3, second paragraph

Delete entire paragraph

Page 182, Alternative 3, fourth paragraph

Replace entire paragraph with the following:

Various acquisitions totalling over 33,000 acres, several mineral withdrawals (totalling 30,000 acres) including the Bodie Bowl National Historic Landmark, application of the more restrictive VRM Class I (6%) and II (40%) standards on 347,000 acres, and proactive land use prescriptions (e.g. yearlong and seasonal protections, salable mineral prohibitions, etc.) would reduce or eliminate many visual impacts and considerably benefit visual resources in the resource area.

Route designations would benefit local visual resources more than Alternatives 1 and 2 because of greater VRM class restrictions and wildlife habitat protection. The stronger VRM class restrictions would mitigate more routes that visually scar landscapes, especially on hillsides. The Bridgeport, Long Valley, Bodie Hills, and Owens Valley Management Areas would derive the greatest benefits.

The increased emphasis to improve wildlife habitat and watershed conditions would provide additional benefits to scenery on over 114,000 acres where a desired plant community program will be implemented. Wildlife habitat management in association with desired plant community management would provide greater uniform and vigorous vegetative cover which would maintain or improve visual resources in the resource area.

Significant areas benefitted include the Slinkard Valley and Conway Summit ACECs, Bodie Bowl, Mono Basin, Granite Mountain, south Tableland, Crater Mountain ACEC, Virginia Creek and the Alabama Hills ACEC.

Locatable mineral development could adversely affect localized viewsheds at specific locations of high or moderate mineral potential in the resource area.

Page 183, second column, first paragraph

Replace: entire last sentence, "As a result...." *with* "This alternative will provide fewer proactive recreation opportunities and experiences than Alternatives 3 and 4."

Page 183, second column, second paragraph, first sentence

Replace: "some OHV access and dispersed camping opportunities would be lost in seasonal protection areas, sensitive viewsheds, wetlands, etc." *with* "fewer OHV access and dispersed camping opportunities would be lost than under Alternatives 3 and 4 due to less restrictive VRM standards, a lack of DPC management and seasonal closures. Any loss of OHV access and camping opportunities would result from application of VRM standards in sensitive viewsheds, cultural resources protection, etc."

Page 183, second column, fourth paragraph

Replace entire paragraph with: "Depending on the scale and overall project operation, mineral development in the Bodie Bowl and at Golden Gate Mine could degrade historic values and recreation opportunities. A major mining operation at the Bodie Bowl would potentially impair recreation and historic values of the area. Until a plan of operations describing any future mining development is submitted and approved, recreation use in the Bodie Bowl is expected to increase slightly."

Page 184, first column, Conclusion, fifth sentence

Replace: entire sentence "Minerals development...." *with* "Depending on the project size and overall operation, historic values in the Bodie Bowl and at the Golden Gate Mine could be degraded. Minerals development would degrade semi-primitive values in local areas of Bridgeport Valley and the South Inyo Management Areas."

Page 184, second column, first paragraph

Replace: last two sentences "Area visitors...." *with* "This alternative would provide the least proactive recreation opportunities and experiences on public lands."

Page 185, first column, Conclusion

Replace: second sentence, "Areawide...." *with* "Areawide route designations would minimally reduce OHV access and dispersed camping opportunities."
Replace: seventh sentence, "Minerals development...." *with* "Depending on the project size and overall operation, historic values in the Bodie Bowl and at the Golden Gate Mine could be degraded. Minerals development would degrade semi-primitive values in local areas of Bridgeport Valley and the South Inyo Management Areas."

Page 185, Alternative 3, second column, first sentence

Replace: sentence, "This alternative...." *with* "This alternative would provide more proactive recreation opportunities and experiences than Alternatives 1 and 2."

Page 185, second column, second paragraph

Add after first sentence: "Seasonally closed areas to protect sage grouse leks in the Bodie Hills and Long Valley areas would eliminate OHV access and camping opportunities four months per year."

Page 185, second column, fifth paragraph

Delete: third sentence, "In the long term...."
Add at end of paragraph: "Depending on the project size and overall operation, historic values in the Bodie Bowl could be degraded. A major mining operation at the Bodie Bowl would potentially impair recreation and historic values of the area. Until a plan of operations describing any future mining development is submitted and approved, recreation use in the Bodie Bowl is expected to increase slightly."

Pages 192-193, Impact on Pronghorn, Alternatives 1, 2, and 3, fifth sentence

Replace: "in the Benton and Hammil Valley areas" *with* "in the Benton Valley and a moderate impact in the Hammil Valley area."

Page 193, Alternative 2, sixth sentence

Replace: "on the small Hammil Valley population (approximately 25 animals)." *with* "to habitat for approximately 70 animals."

Appendix 2

Page 246, Table 1, Noneligible River Segments, Coleville Management Area

Delete: Mill Creek. The Mill Creek river segment has been reevaluated and determined to be eligible for study as a potential addition to the Wild and Scenic River system.

Page 248, Table 2 (Section A), Eligible River Segments, Coleville Management Area.

Add: River Segment: Mill Creek. Reason for consideration: C (Potential Rivers Inventory), D (Other). Length on BLM land: 1.25 miles. Free-flowing. Outstandingly remarkable values: E (Fish and Wildlife) and H (Ecological). Potential classification: wild. Acreage: 400.

Page 249, Table 2 (Section B)

Add: Management Area: Coleville. River segment: Mill Creek. Segment description: From the Toiyabe National Forest boundary in Section 31 ,T.8N., R. 23E., M.D.M. to Section 29, T.8N., R.23E., M.D.M. Description of Outstanding Values:

> Has excellent capability for supporting an exceptional quality Lahontan cutthroat trout (listed species--threatened status) population. The trout was

reintroduced to the stream in May of 1991. The majority of the stream segment currently contains high quality, reproducing populations of wild brown and rainbow trout. The stream also provides habitat for the native Tahoe sucker.

Exceptionally high value as a riparian area, representative of primitive and natural conditions in the eastern Sierra. Also offers high quality upland terrestrial and aquatic habitats. Adjacent vertical canyon walls and streamside meadow areas give the site a wide variety of vegetation communities. The canyon segment and immediate watershed have not been affected by man's activities. The stream contributes significantly to the area's biological diversity through representation of a broad mix of plant and animal species.

Other Comments: Determine the interest of the Toiyabe National Forest to conduct joint studies on adjacent portions of the creek.

Page 250, Table 2, Section B, Dog Creek, Description of Outstanding Values, first paragraph, last sentence

Replace: "from" *with* "which may be associated with"

Appendix 6

Appendix 6, Threatened and Endangered Plant and Animal Species and Related Designations, has been modified and is reprinted in its entirety on the following pages.

Appendix 6
from draft RMP
(Revised)

Plant and Animal Species of Management Concern

Scientific Name	**Common Name - Status**
PLANT SPECIES	
Astragalus johannis-howellii	Long Valley milkvetch - SR/C3c
Astragalus lentiginosus var. piscinensis	Fish Slough milkvetch - SE/C1
Astragalus monoensis	Mono milkvetch - SR/C2
Arabis bodiensis	Bodie arabis - C2
Calochortus excavatus	Inyo County star tulip - C2
Caulostramina jaegerianus	Jaeger's caulostramina - C2
Cusickiella quadricostata	Bodie Hills draba - C2
Dedeckera eurekensis	July gold - SR/C3c
Eriogonum ampullaceum	Mono buckwheat - C2
Eriogonum eremicola	Wild Rose Canyon buckwheat - C2
Lupinus duranii	Mono Hills lupine - C2
Oryctes nevadensis	Nevada oryctes - C2
Perityle inyoensis	Inyo laphamia - C2
Phacelia monoensis	Mono County phacelia - C2
Sidalcea covillei	Owens Valley checker-bloom - SE/C2
Streptanthus oliganthus	Masonic Mountain jewel flower - C2
ANIMAL SPECIES	
Aplodontia rufa californica	Mountain beaver - C2
Batrachoseps campi	Inyo Mountains slender salamander - C2
Buteo regalis	Ferruginous hawk - C2
Buteo swainsoni	Swainson's hawk - ST/C2
Charadrius alexandrinus nivosus	Western snowy plover - C2
Cyprinodon radiosus	Owens pupfish - SE/FE
Falco peregrinus anatum	Peregrine falcon - SE/FE
Gila bicolor snyderi	Owens tui chub - SE/FE
Gulo gulo luteus	California wolverine - ST/C2
Haliaeetus leucocephalus	Bald eagle - FE
Hydromantes platycephalus	Mt. Lyell salamander - C2
Hygrotus fontinalis	Travertine band-thigh diving beetle - C2
Microtus californicus vallicola	Owens Valley California vole - C2
Oncorhynchus clarki henshawi	Lahontan cutthroat trout - FT
Ovis canadensis californiana	California bighorn sheep - ST/C2
Plecotus townsendii townsendii	Pacific western big-eared bat - C2
Trigonoscuta owensi	Owens sand dune snout beetle - C2
Vulpes vulpes necator	Sierra Nevada red fox - ST/C2

SE = California State Endangered
ST = California State Threatened
SR = California State Rare

(See page A6-13 for definitions.)

C1 = Federal Candidate Category 1
C2 = Federal Candidate Category 2
C3 = Federal Candidate SubCategory 3c
FE = Federal Endangered
FT = Federal Threatened

California State Endangered "Endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

California State Threatened "Threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management. Any animal determined by the commission to be "rare" on or before January 1, 1985, is a "threatened species."

California State Rare A native California plant (species, subspecies or variety) is "rare" when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Section 1901 of the Fish and Game Code).

Federal Category 1 Category 1 comprises taxa for which the U.S. Fish and Wildlife Service currently has substantial information on hand to support the biological appropriateness of proposing to list as endangered or threatened. Proposed rules have not yet been issued because they have been precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated, however, and the U.S. Fish and Wildlife Service encourages federal agencies and other appropriate parties to give consideration to such taxa in environmental planning.

Federal Category 2 Category 2 comprises taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. The U.S. Fish and Wildlife Service emphasizes that these taxa are not being proposed for listing at this time, and that there are not specific plans for such proposals unless additional information becomes available. Further biological research and field study may be needed to ascertain the status of taxa in this category, and it is likely that many will be found not to warrant listing. The U.S. Fish and Wildlife Service hopes that this notice will encourage investigation of the status and vulnerability of these taxa, and consideration of them in the course of environmental planning.

Federal Subcategory 3c Subcategory 3c comprises taxa that are now considered to be more abundant and/or widespread than previously thought. Should new information suggest that any such taxon is experiencing a numerical or distribution decline, or is under a substantial threat, it may be considered for transfer to Category 1 or 2.

Federal Endangered The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range, other than a species of the class Insecta determined by the Secretary of Interior to constitute a pest whose protection under the provision of the Endangered Species Act would present an overwhelming and overriding risk to man.

Federal Threatened The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Glossary

Modesto Ridgerunner High Desert Rally near Bridgeport.

Glossary (Including Acronyms)

ACEC. Area of Critical Environmental Concern: An area within the public lands where special management attention is required to protect important historic, cultural, or scenic values, fish and wildlife or natural systems or processes, or to protect life and safety from natural hazards.

ACTIVITY PLAN: A detailed, site-specific plan for management of a single resource program or plan element undertaken as necessary to implement the more general resource management plan (RMP) decisions.

ALLOTMENT: An area of land assigned to one or more livestock operators for grazing livestock. Allotments generally consist of BLM land but may also include state-owned and private land. An allotment may include one or more separate pastures. Livestock numbers and seasons of use are specified for each allotment.

ALLOTTED: An area of land determined by the RMP to be established as an allotment to be used for grazing livestock.

AMP. Allotment Management Plan: A livestock grazing management plan for a specific allotment based on multiple-use resource management objectives. The AMP considers livestock grazing in relation to other uses of the range and in relation to renewable resources-watershed, vegetation and wildlife. An AMP establishes the seasons-of-use, the number of livestock to be permitted on the range and the rangeland developments needed.

AMS. Analysis of Management Situation: A step in the BLM planning process that identifies existing management, physical resources and opportunities to meet the needs, concerns and issues identified through resource management planning. The AMS results in a reference document, which is kept in the resource area office. The AMS document is open for public inspection but is not distributed to the public.

AUM. Animal Unit Month: The amount of forage necessary for the sustenance of one cow or five sheep for 1 month.

BACKCOUNTRY BYWAY: A backcountry, non-paved route designated for its scenic or recreation value. Often requires the use of a 4-wheel drive vehicle.

BASE PROPERTY: Land that has the capability to produce crops or forage that can be used to support authorized livestock for a specified period of the year. Federal range grazing privileges (AUMs) are attached.

BLM. Bureau of Land Management.

CALVING AREA: An area important for tule elk during the calving season (spring and early summer). It typically includes cover to hide calves from predators, and palatable and nutritious forage.

CANDIDATE SPECIES:

Category 1: Plant and animal species for which the U.S. Fish and Wildlife Service currently has on file substantial information to support a proposal to list as threatened or endangered.

Category II: Plant and animal species for which current information indicates that a proposal to list as threatened or endangered is possibly appropriate, but for which more information is needed to support a listing proposal.

CFR. Code of Federal Regulations.

COMMON VARIETIES: Mineral deposits which, although they may have value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts, do not possess a distinct special economic value over and above the normal uses of the general run of such deposits.

CRMP. Coordinated Resource Management Plan: A plan for management of one or more allotments that involves all the affected resources, e.g., range, wildlife and watershed.

CULTURAL PROPERTIES: Those fragile and nonrenewable remains of human activities, occupations, and endeavors as reflected in sites, buildings, structures, or objects, including works of art, architecture, and engineering. Cultural resource are commonly discussed as prehistoric and historic values, but each period represents a part of the full continuum of cultural values from the earliest to the most recent.

CULTURAL RESOURCES: A broad, general term which may refer to cultural properties, or to any traditional lifeway value of an identified social or cultural group.

DESIGNATED RIGHT-OF-WAY CORRIDOR: A parcel of land, either linear or areal, that has been identified by law, by Secretarial Order, through the land use planning process, or by other management decision, as a preferred location for existing and future right-of-way grants and suitable to accommodate more than one type of right-of-way or one or more rights-of-way which are similar, identical, or compatible.

DESIRED PLANT COMMUNITY: A plant community in which specific vegetative characteristics are defined to attain the desired goal for the aggregation of plants and animals living within the site.

DISCRETIONARY ACTION: Any action which the BLM has authority to either approve or deny.

EA. Environmental Assessment: The procedure for determining the significance of impacts of some proposed action on a given environment and the documentation of the analysis. An EA may be preliminary to an EIS.

ECOLOGICAL CONDITION: The present state of an ecological site in relation to the potential natural community. An expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble the potential natural plant community. Ecological status was formerly known as range condition. Ecological condition classes are defined below:

Early Seral: Sites with 0 to 25% of the potential natural community present.

Mid Seral: Sites with 26 to 50% of the potential natural community present.

Late Seral: Sites with greater than 50% of the potential natural community present.

Potential Natural Community: The final vegetation community that emerges after a series of successive vegetational stages. This climax community perpetuates itself unless disturbed by natural or human forces.

EIS. Environmental Impact Statement.

ENDANGERED SPECIES: An animal or plant whose prospects of survival and reproduction are in immediate jeopardy, and as further defined by the Endangered Species Act of 1973, as amended.

ESA. Endangered Species Act of 1973 (as amended): Federal law to ensure that no federal action will jeopardize the continued existence of federally listed or proposed threatened or endangered species of plants or animals.

FIRE MANAGEMENT: The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management activities. Fire management is a program of placing fire in perspective with overall land management objectives to fulfill the needs of society.

FLPMA. Federal Land Policy and Management Act of 1976: Public Law 94-579, which gives the BLM legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the management, protection, development and enhancement of the public lands.

FULL FIRE SUPPRESSION: An all-out effort to extinguish wildfires to prevent unacceptable resource damage or loss of life and property. Includes bulldozers, retardant drops, etc.

GRAZING PREFERENCE: The total number of AUMs of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee.

GRAZING SYSTEM: Sequence of livestock grazing, by area, designed to accomplish management objectives.

HMP. Habitat Management Plan: A written and officially approved plan for a specific geographic area which identified wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

KOP. Key Observation Point: One or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing. This includes all federal, state, and county maintained roads; recreation use trails, campgrounds, scenic overlooks, day use areas, etc.

kV. Kilovolt.

LADWP: Los Angeles Department of Water and Power.

LEASABLE MINERALS: Minerals such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources and all other minerals that may be acquired under the Mineral Leasing Act of 1920, as amended.

LEK: Sage grouse strutting grounds used during the mating season for courtship displays.

LIVESTOCK TRAILING: The intentional movement of livestock by herding them from one location to another.

LOCATABLE MINERALS: Any valuable mineral that is not salable or leasable, including gold, silver, copper, tungsten and uranium, etc.

MFP. Management Framework Plan: A planning decision document prepared before the effective date of the regulations implementing the land use planning provisions of FLPMA.

MINERAL ENTRY: The filing (location) of mining claims with the BLM by an individual to protect his right to a valuable (locatable) mineral.

MINERAL ESTATE: Mineral and/or subsurface ownership.

MINERAL MATERIALS: Common varieties of sand, building stone, gravel, clay, moss rock etc. obtainable under the Mineral Act of 1947, as amended.

MINERAL WITHDRAWAL: Closure of land to mining laws, including sales, leasing and location, subject to valid existing rights.

MONITORING: The orderly collection and analysis of data to evaluate progress in meeting resource management objectives. Monitoring may also include: 1) the collection of data to evaluate progress in complying with laws, regulations, policies, executive orders, and management decisions. 2) the collection of data to assist in resource protection. Sampling of data and observation of progress toward plan objectives, the accuracy of impact analyses, and the effectiveness of mitigation measures are also of particular interest in terms of RMP monitoring activities.

MULTIPLE-USE: Management of public lands and their various resource values so that they are used in the combination best meeting the present and future needs of the American people. Relative resource values are considered, not necessarily the combination of uses that will give the greatest potential economic return or the greatest unit output.

NATIONAL HISTORIC LANDMARK: A site, structure or object judged by the Secretary of Interior to possess national significance in American history, archeology, architecture, engineering and culture.

NATIONAL NATURAL LANDMARK: A natural area designated by the Secretary of Interior as having national significance.

NATIONAL WILD AND SCENIC RIVER SYSTEM: Rivers with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition.

NATIONAL WILDERNESS PRESERVATION SYSTEM: A system composed of federally owned areas designated by Congress as wilderness areas. These areas shall be administered for the use and enjoyment of the American people; management actions will preserve wilderness values for future use and enjoyment.

NCA. National Conservation Area: An area of public lands managed by the Bureau of Land Management which has been established by Congress for the purpose of protecting and conserving identified resource values of national interest. An NCA is managed for multiple use and sustained yield in conformance with the Resource Management Plan.

NEPA. National Environmental Policy Act of 1969.

NHPA. National Historic Preservation Act: The primary federal law providing for the protection and preservation of our cultural resources. Making it a national policy to preserve our cultural heritage, NHPA established the National Register of Historic Places, the Advisory Council on Historic Preservation and State Historic Preservation Officers.

NOI. Notice of Intent: This term has two distinct meanings: 1) A notice submitted to BLM by a geophysical exploration company outlining a proposed mineral exploration program. This is a non-discretionary action, meaning that BLM cannot prohibit. 2) A notice printed in the Federal Register announcing that the agency is going to do an RMP and/or and EIS.

NRHP. National Register of Historic Places: A list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology and culture maintained by the Secretary of the Interior. Expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 U.S.C. 462) and Section 101(a)(1)(A) of the National Historic Preservation Act.

NSO. No Surface Occupancy: Areas which need to be protected from surface-disturbing activities. Actions that do not cause surface disturbance and (or) are determined not to affect the resource involved, may be allowed.

OFF-HIGHWAY VEHICLE DESIGNATIONS:

Open: Means an area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards set forth in Subparts 8341 and 8342 of this title.

Limited: Means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: Numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

Closed: Means an area where off-road vehicle use is prohibited. Use of off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer.

OHV. Off-Highway Vehicle: Any motorized vehicle designed for cross-country travel over any type of natural terrain. Exclusions (from Executive Order 11644, as amended by Executive Order 11989) are any military, fire, emergency or law enforcement vehicles while being used for emergency purposes, any vehicle whose use is expressly authorized or otherwise officially approved, vehicles in official use and any combat support vehicle in time of national defense emergencies.

PASTURE: As used in this document, a subdivision of a grazing allotment.

PATENT: A government deed that conveys legal title for land to an individual or another government entity.

PERMITTEE (GRAZING): A person who has livestock grazing privileges on an allotment or allotments within the resource area.

PETROGLYPH: Prehistoric rock art, pecked into a stone surface.

PLAN AMENDMENT: A change in a RMP initiated by the need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan. An amendment shall be made through an EA of the proposed change or an EIS if necessary. If an EIS is prepared, a 90-day public review period is required.

PLANNING CRITERIA: The standards or rules and other factors developed by the manager and interdisciplinary team for their use in forming judgments about decision making, analysis, and data collection during planning.

PLAN OF OPERATIONS: As used in this document, a plan submitted by an operator (lessee or mining claimant) which outlines in detail proposed exploration and mining activities that would disturb more than 5 acres.

PRESCRIBED FIRE: The skillful application of fire to natural fuels under conditions of weather, fuel moisture, soil moisture, etc., that will allow confinement of the fire to a predetermined area and at the same time produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives of wildlife management, grazing, hazard reduction, etc. Its objective is to employ fire scientifically to realize maximum benefits at minimum damage and acceptable cost.

PUBLIC LAND: Vacant, unappropriated and unreserved land that never left federal ownership; also, land in federal ownership obtained in exchange for public land or for timber on public land; land administered by the BLM.

RANGE IMPROVEMENT: An authorized activity or program on or relating to rangelands which is designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock, wild horses and burros, and wildlife. The term includes, but is not limited to, structures; treatment projects, and use of mechanical means to accomplish the desired results.

RARE SPECIES: A plant species that, although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens; the rare category is a state category, not a federal one.

RECREATION OPPORTUNITIES: Those outdoor recreational activities which offer satisfaction in a particular physical, social and management setting in the EIS area. These activities are primarily hunting, fishing, wildlife, viewing, photography, boating and camping.

RESOURCE AREA: The smallest administrative sub-division of a BLM district.

RIGHT-OF-WAY: The legal right for use, occupancy, or access across land or water areas for a specified purpose or purposes. Also, the lands covered by such a right.

RIGHT-OF-WAY CORRIDOR: See Designated Right-of-Way Corridor.

RIPARIAN AREA: Geographically delineated areas with distinctive resource values and characteristics that include: 1) areas of land that are directly influenced by free or unbound water and have visible or physical characteristics reflecting this influence. 2) the stream channel, spring, or other water body which comprises the aquatic environment.

RMP. Resource Management Plan: A written land use plan that outlines BLM's decisions and strategies for management of the resources in a particular area. The RMP replaces the MFP in BLM's planning system.

ROADED NATURAL: Area is characterized by predominantly natural appearing environments with moderate evidences of the sight and sound of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.

ROW. Right-Of-Way.

R&PP. Recreation and Public Purposes Act: This act authorizes the Secretary of the Interior to lease or convey public land for recreational and public purposes under specified conditions to states or their political subdivisions and to nonprofit corporations and associations.

SALABLE MINERALS: See Mineral Materials.

SCE: Southern California Edison.

SCENIC BYWAY: A paved or all-weather, maintained road designated for its scenic or recreational values.

SCOPING PROCESS: An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, written comments in response to news releases, direct mailings and articles about the proposed action and scoping meetings.

SEASONAL PROTECTION: During the period specified, no discretionary actions which would adversely affect target resources would be allowed. Existing uses and casual use would be managed to prevent disturbance which would adversely affect the target resources. Locatable mineral exploration and development could continue, with appropriate mitigation.

SEASON OF USE: The time of livestock grazing on a range area.

SEMI-PRIMITIVE MOTORIZED: Area is characterized by a predominantly natural of natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.

SEMI-PRIMITIVE NON-MOTORIZED: Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. There area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.

SENSITIVE SPECIES (PLANTS AND ANIMALS): Species occurring on public lands and requiring special management attention to protect it and to prevent irreparable damage to the important resources or other natural systems or processes on which it depends. The sensitive list is made up of species listed in category 3c in the Federal Register, Vol. 50 No. 188, September 27, 1985, page 39526.

SHPO. State Historic Preservation Officer: The official who is appointed by the Governor to be responsible for administering the State Historic Preservation Program pursuant to Section 101(b)(1) of the National Historic Preservation Act.

SPECIAL STATUS SPECIES: Plant and animal species either federally listed or proposed for listing as threatened or endangered, and state-listed or BLM determined priority species.

SPECIES OF MANAGEMENT CONCERN: Plant or animal species which have no formal classification under the Endangered Species Act of 1973 (as amended), but due to low population level or limited available habitat require special management actions to insure their continued existence. Management actions are designed to prevent formal listing of the species.

SPLIT ESTATE: The surface estate and the mineral estate of parcel of land belong to different owners.

STIPULATION: A requirement, usually dealing with protection of the environment, that is made a part of a lease, grant, or other authorizing document.

STOCKING RATE: An expression of the number of animals and the grazing period allotted to a specific area. It is usually expressed as a ratio, such as acres/AUM.

STREAMBANK SOIL ALTERATION RATING: A rating, by class, which reflects the changes taking place in the bank from any force. The streambank is evaluated on the basis of how far it has moved away from optimum conditions for the respective habitat type.

SUBSURFACE MINERALS: Minerals found below the earth's surface, including oil and gas.

THREATENED SPECIES: Any plant or animal species that is likely to become an endangered species throughout all or a significant portion of its range, as defined by the U.S. Fish and Wildlife Service under the authority of the Endangered Species Act of 1973.

Threatened species under the California Endangered Species Act means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management. Any animal determined by the commission as rare on or before January 1, 1985, is a threatened species.

TRANSMISSION LINE CORRIDOR: The preferred location of future electric transmission lines.

TRESPASS: The use of public land without proper authority, resulting either from a willful or negligent act.

UNALLOTTED: Refers to an area of land which BLM has determined that shall not to be grazed by livestock.

UTILIZATION: The proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). May refer to either a single plant species, a group of species, or the vegetation as a whole. Utilization is synonymous with use.

VEGETATIVE BANK PROTECTION RATING: A rating, by class, which reflects the ability of streamside vegetation to protect the streambank from erosion. Streamside vegetation is evaluated on the basis of how far it is from optimum conditions for the respective habitat type.

VISUAL RESOURCES: The visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features) which result in scenic quality.

VRM. Visual Resource Management: Management system containing specific objectives for maintaining or enhancing visual resources, including the amount of acceptable change to the existing landscape to meet established visual goals.

WILDERNESS AREA: An area officially designated as wilderness by Congress. Wilderness areas will be managed to preserve wilderness characteristics and shall be devoted to the public purposes of conservation and recreational, scenic, scientific, education, and historical uses.

WILDERNESS MANAGEMENT POLICY: The BLM policy that governs administration of public lands designated as wilderness areas by Congress. It is based on the Wilderness Act of 1964 and FLPMA of 1976. FLPMA requires a wilderness area to be a roadless area or island that has been inventoried and found to have wilderness characteristics as described in Section 603 of FLPMA and in Section 1(c) of the Wilderness Act.

WINTER RANGE: An area important for terrestrial wildlife species during the winter months. It typically includes palatable and nutritious shrub species on lands mostly free of snow during the winter.

WITHDRAWAL: Actions which restrict the use of public land and segregate the land from the operation of some or all of the public land and/or mineral laws. Withdrawals are also used to transfer jurisdiction of management to other federal agencies.

YEARLONG PROTECTION: No discretionary actions which would adversely affect target resources would be allowed. Existing uses and casual use would be managed to prevent disturbance which would adversely affect the target resources. Locatable mineral exploration and development could continue, with appropriate mitigation.

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Conway Summit Scenic View from U.S. Highway 395.

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Virginia Creek above Conway Summit.

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S-4, S-5, S-10, S-11, S-13, 1-6, 1-7, 1-19, 2-1, 2-4, 2-5, 2-6, 2-7, 2-12, 2-14, 2-15, 2-22, 2-23, 2-26, 2-27, 2-37, 2-41, 2-46, 2-47, 2-58, 2-59, 2-61, 3-9, 3-16, 4-1, 4-2, 4-7, 4-8, 4-9, 4-14, 4-15, 4-16, 4-17, 4-18, 4-19, 4-26, 4-27, A6-9, G-3, G-8

Yearlong Protection

S-2, S-4, S-5, S-10, S-11, 2-2, 2-4, 2-6, 2-7, 2-12, 2-17, 2-18, 2-21, 2-22, 2-26, 2-27, 2-29, 2-33, 2-37, 2-38, 2-41, 2-42, 2-45, 2-46, 2-49, 2-58, 2-59, 4-5, 4-7, 4-8, 4-9, 4-11, 4-12, 4-14, 4-15, 4-16, 4-17, 4-18, 4-19, A1-2, A1-5, A6-9, G-8

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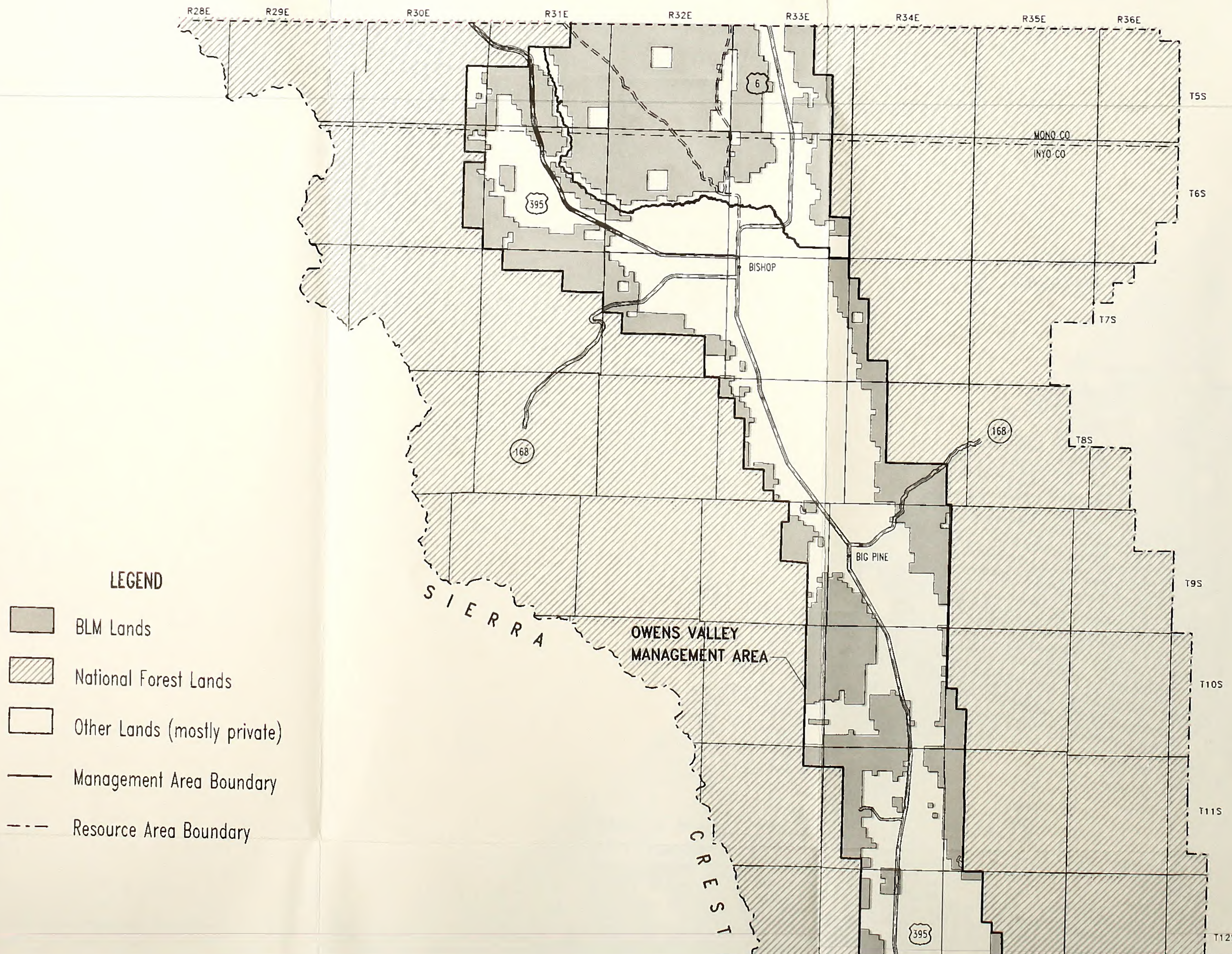
MAP 1
LAND STATUS

U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

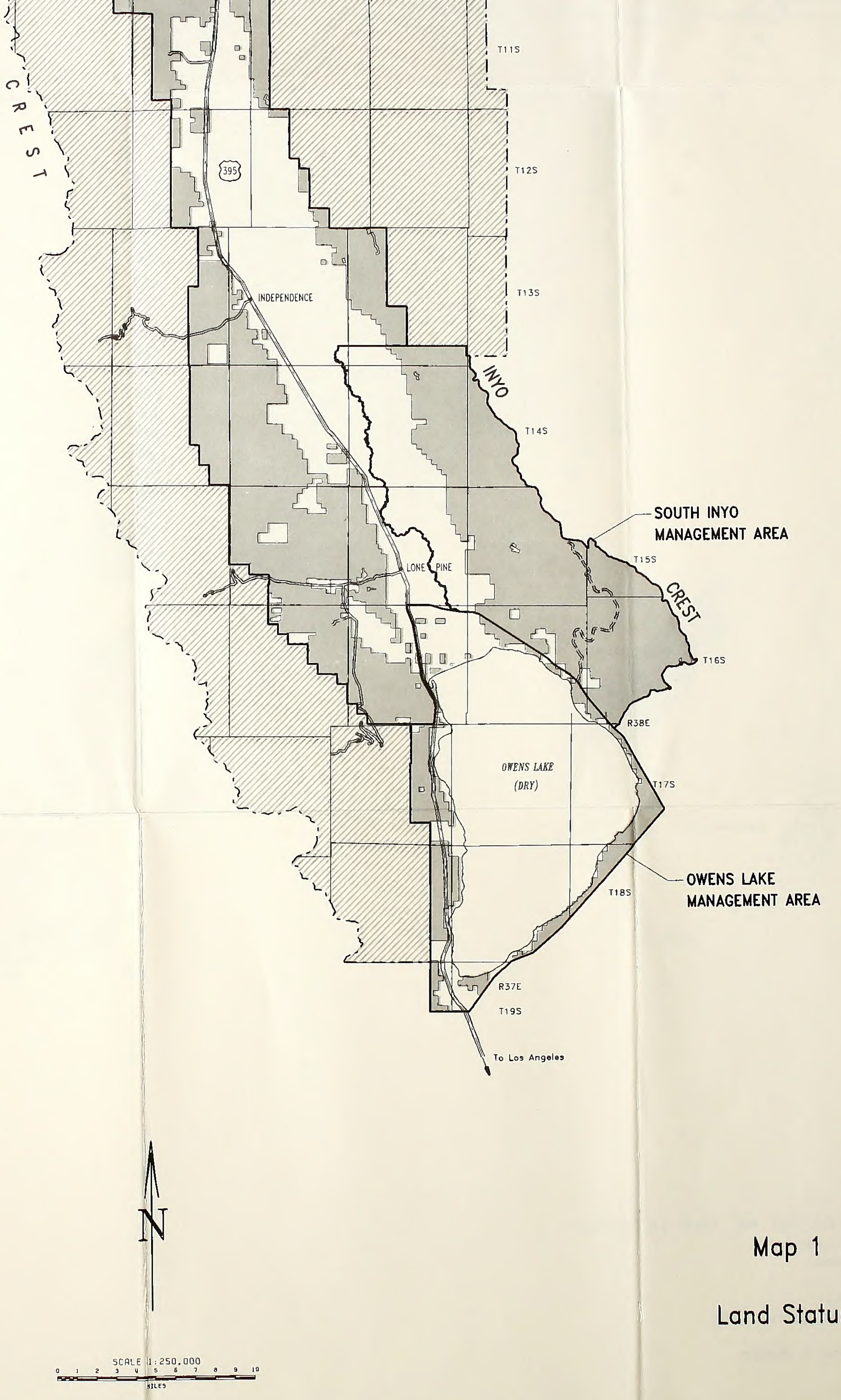
LAND STATUS



☐ Other Lands (mostly private)

— Management Area Boundary

-·- Resource Area Boundary



LOCATION MAP

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Bureau of Land Management
Bishop Resource Area
Bishop, California
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June, 1991

Map 1

Land Status

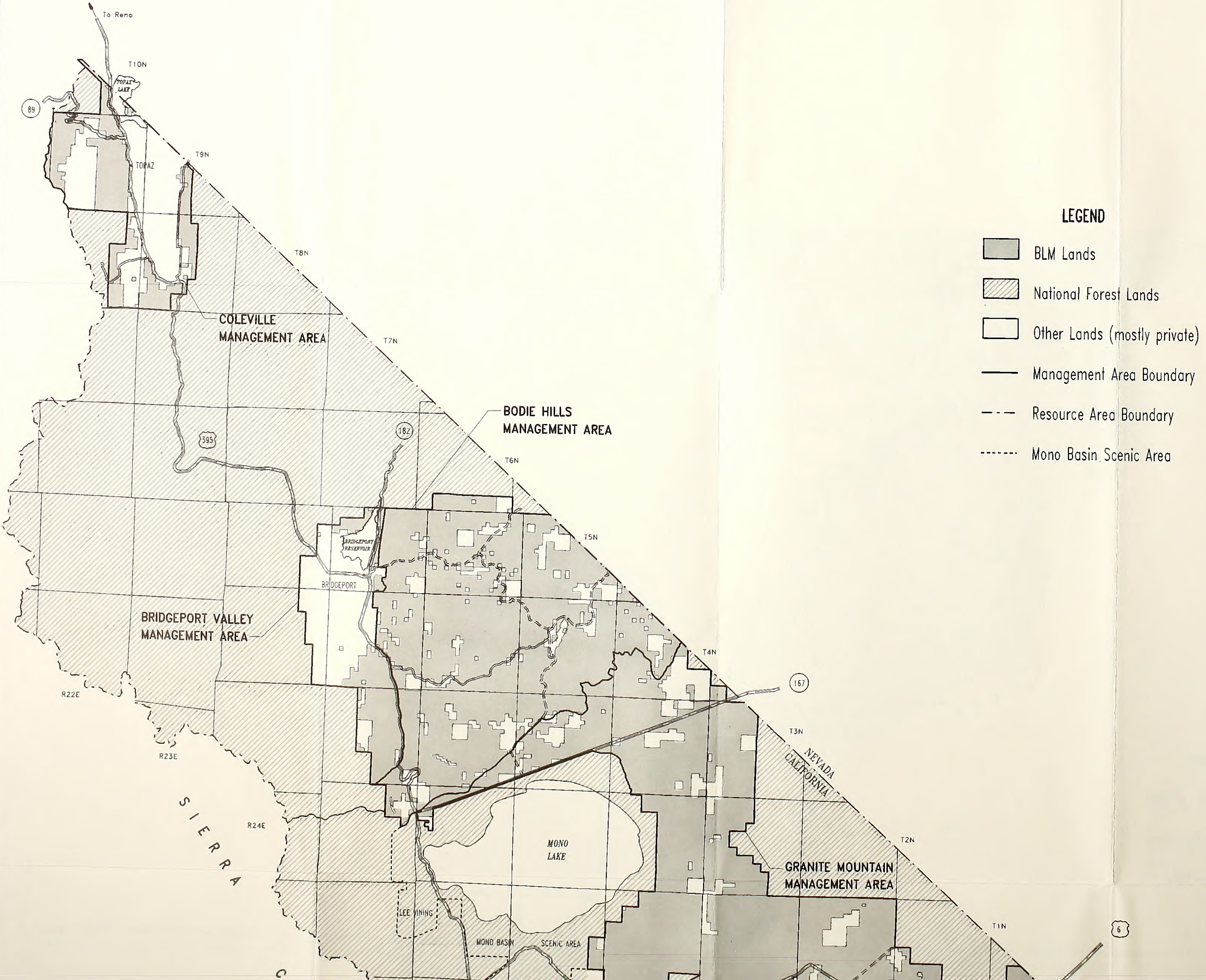
(SOUTH HALF)

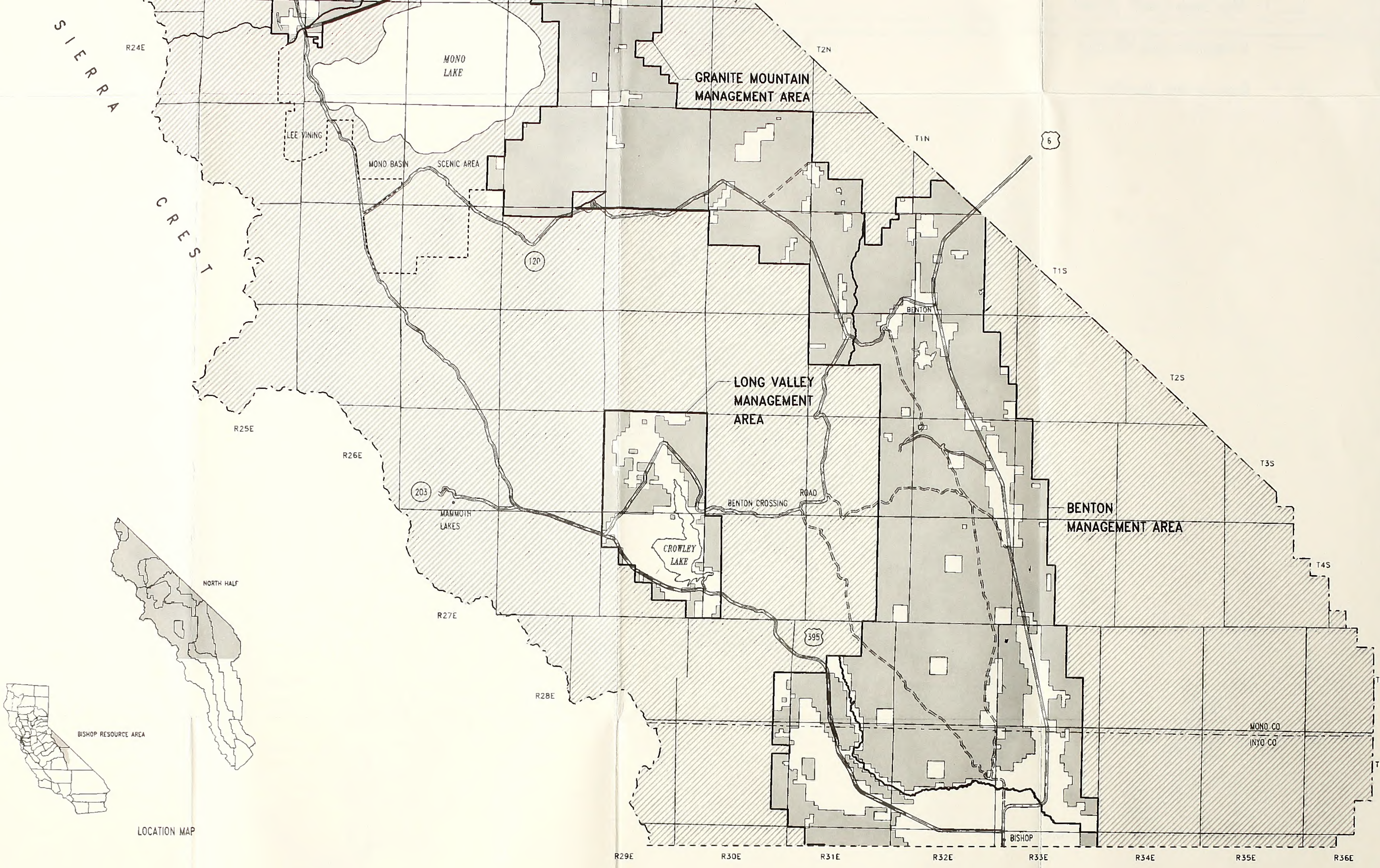
March 3, 1849

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BISHOP RESOURCE AREA RESOURCE MANAGEMENT PLAN

LAND STATUS


LEGEND
▨ BLM Lands
▨ National Forest Lands
☐ Other Lands (mostly private)
— Management Area Boundary
-·- Resource Area Boundary
------ Mono Basin Scenic Area
To Reno
T10N
TOPAZ LAKE
89
TOPAZ
T9N
T8N
COLEVILLE MANAGEMENT AREA
T7N
BODIE HILLS MANAGEMENT AREA
182
395
T6N
T5N
BRIDGEPORT RESERVOIR
BRIDGEPORT
BRIDGEPORT VALLEY MANAGEMENT AREA
T4N
167
R22E
R23E
T3N
NEVADA
CALIFORNIA
R24E
SIERRA
MONO LAKE
T2N
GRANITE MOUNTAIN MANAGEMENT AREA
LEE VINING
MONO BASIN SCENIC AREA
T1N
6



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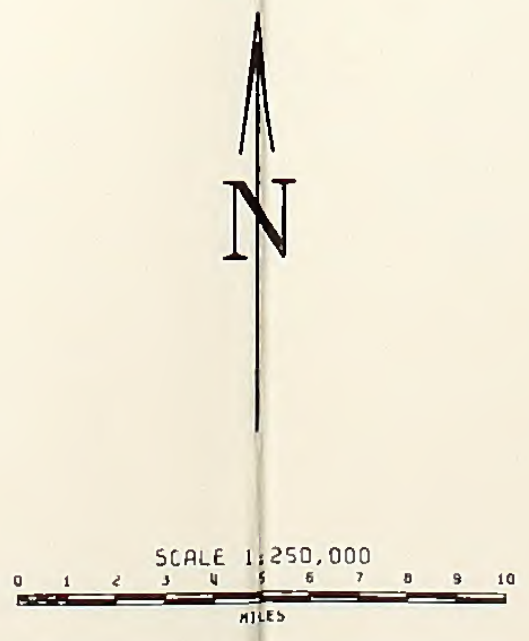


(NORTH HALF)

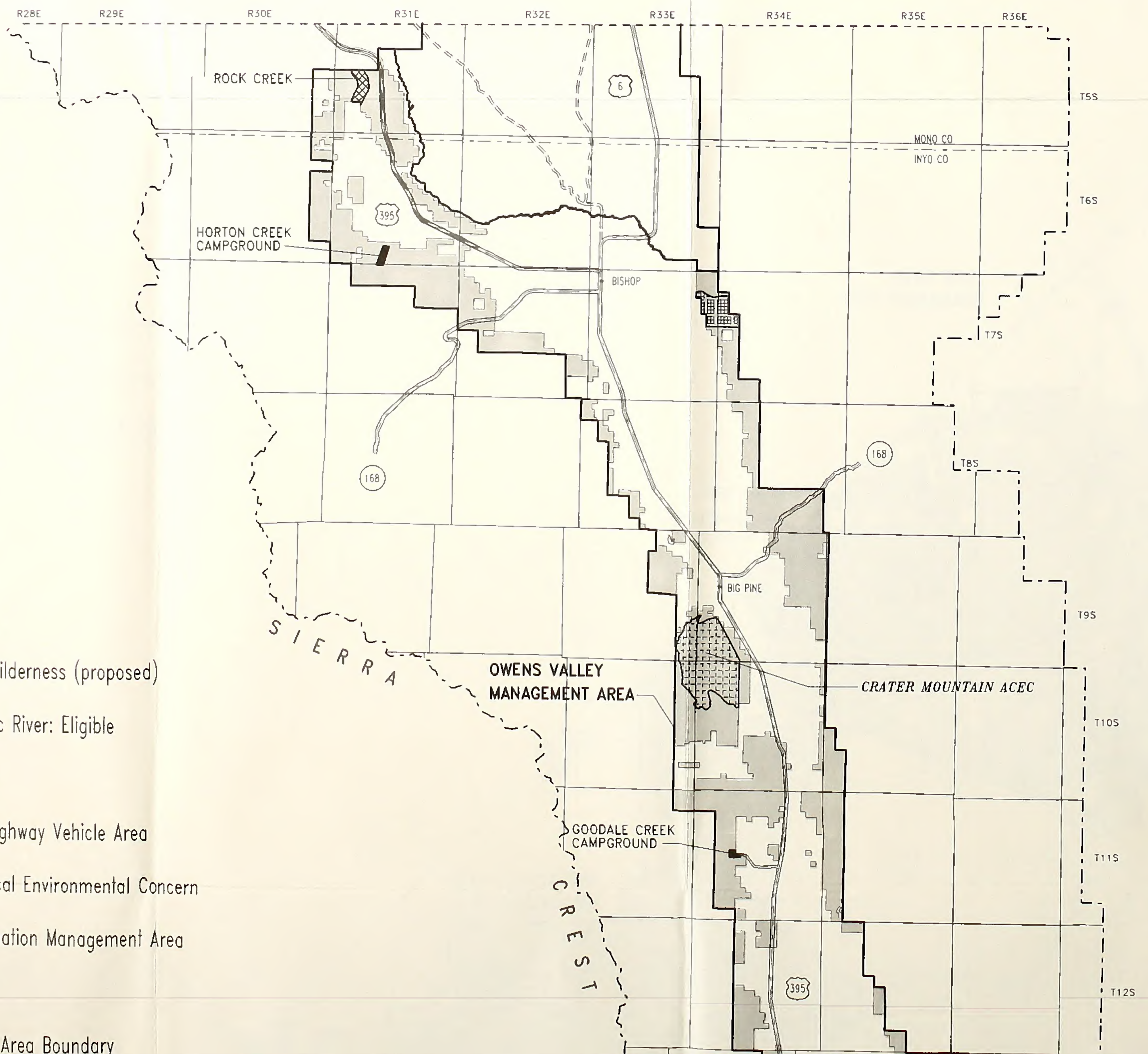
MAP 2
SPECIAL MANAGEMENT AREAS

March 3, 1849

BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SPECIAL MANAGEMENT AREAS



LEGEND

▨ South Inyo Wilderness (proposed)

▩ Wild & Scenic River: Eligible

■ Campground

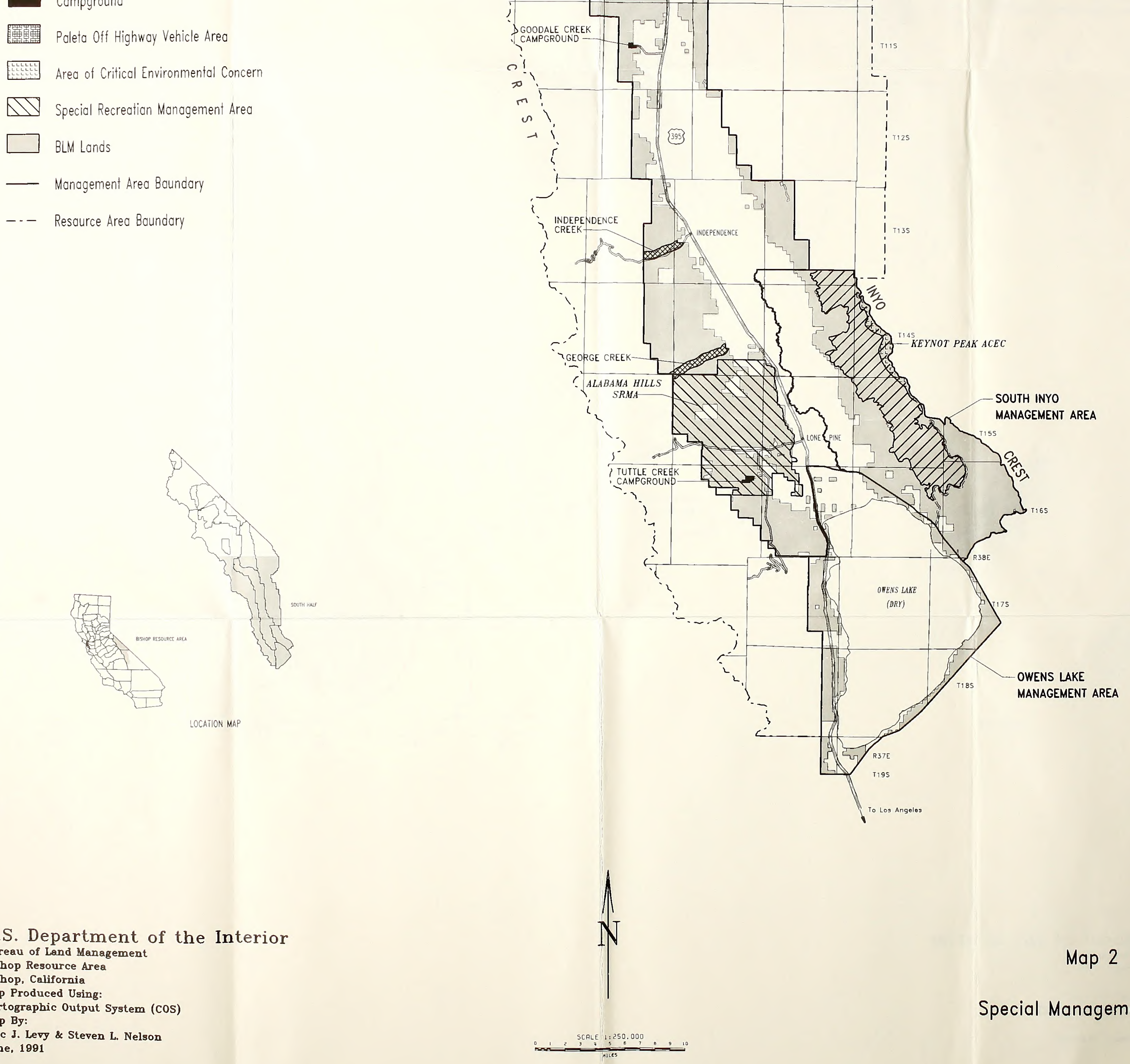
▦ Poleta Off Highway Vehicle Area

⬚ Area of Critical Environmental Concern

▧ Special Recreation Management Area

▒ BLM Lands

— Management Area Boundary



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Map 2

Special Management Areas

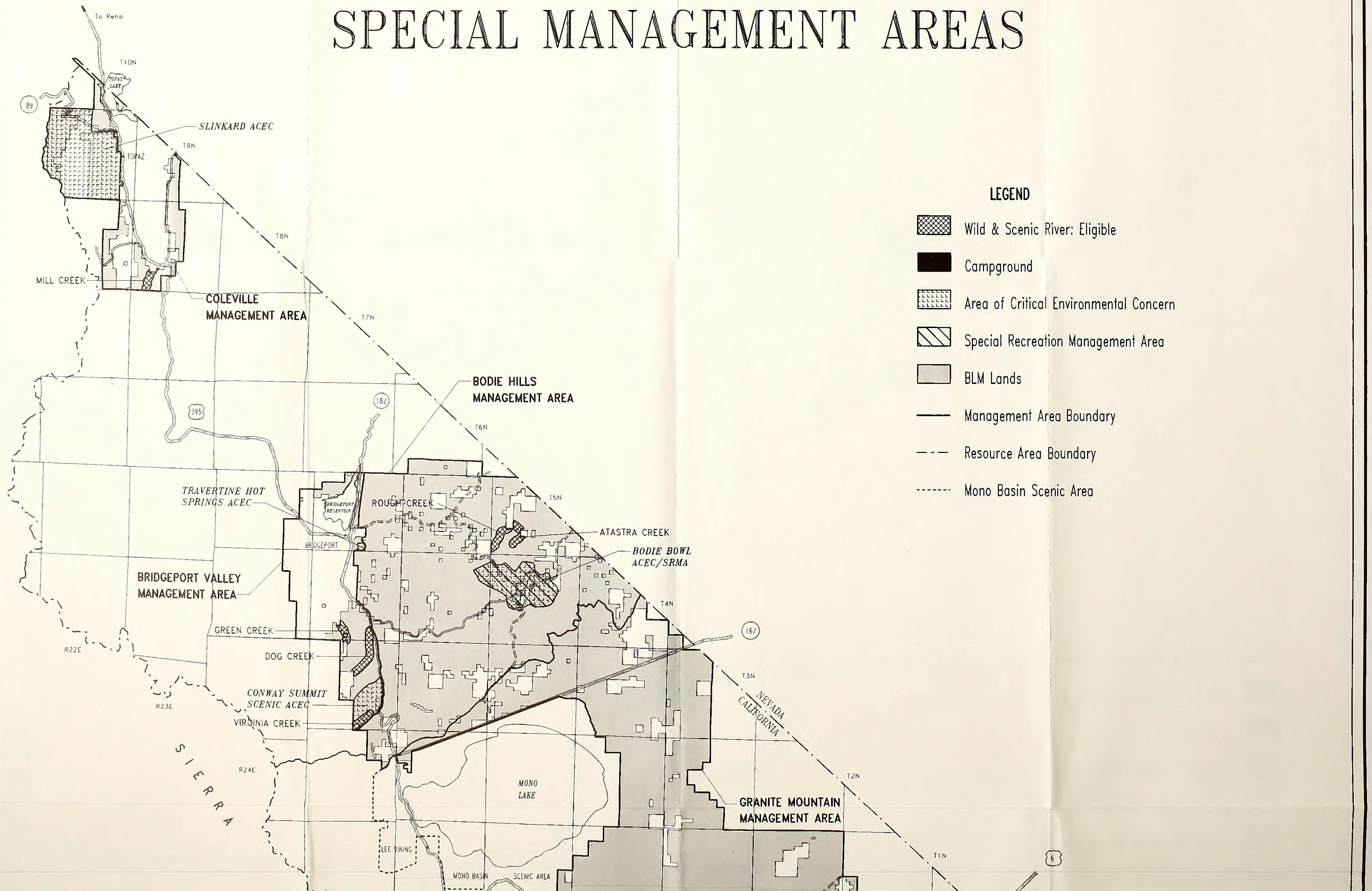
(SOUTH HALF)

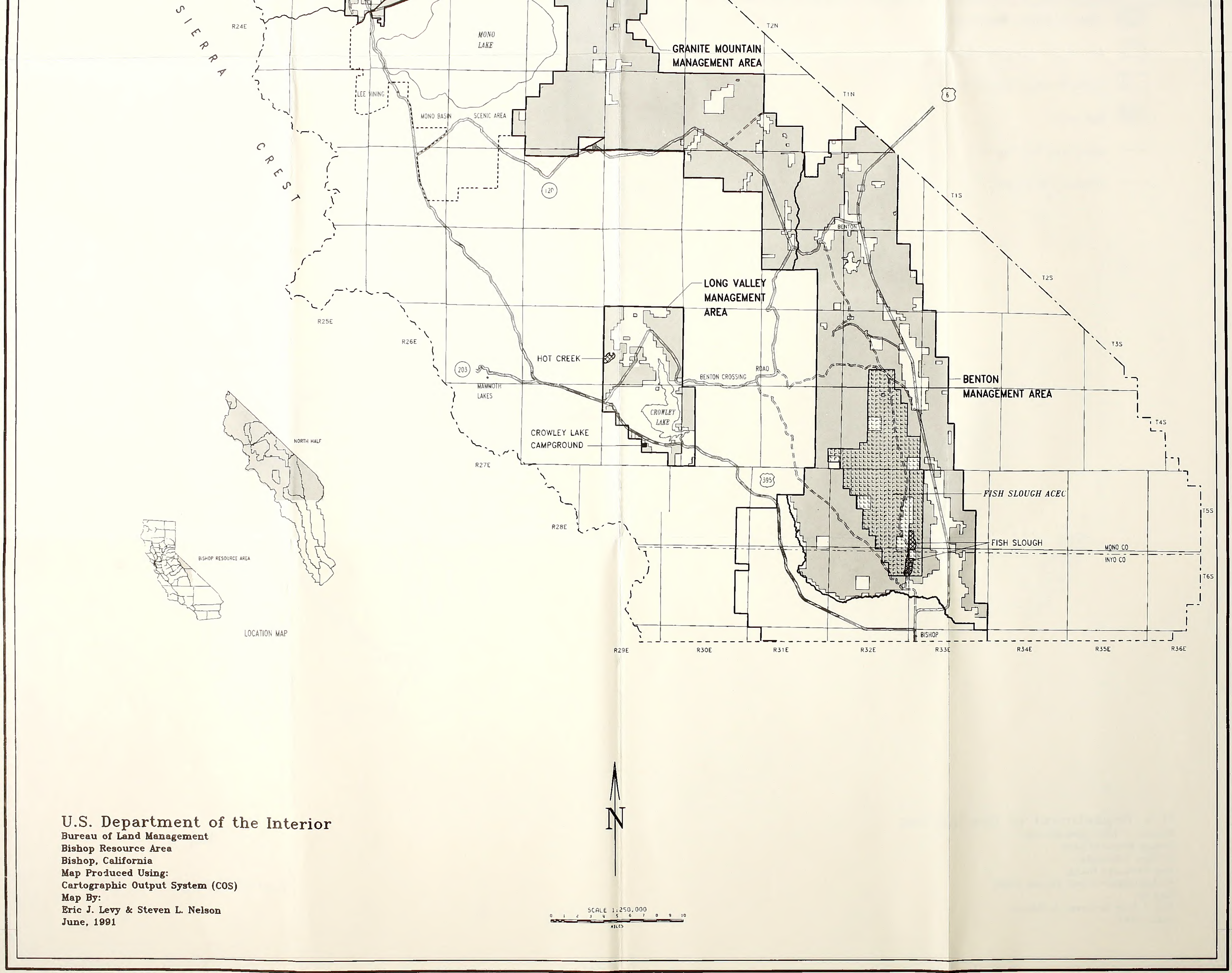
March 3, 1849

BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SPECIAL MANAGEMENT AREAS


To Reno
T10N
TOPAZ LAKE
89
SLINKARD ACEC
T9N
TOPAZ
T8N
MILL CREEK
COLEVILLE MANAGEMENT AREA
T7N
BODIE HILLS MANAGEMENT AREA
182
395
T6N
TRAVERTINE HOT SPRINGS ACEC
BRIDGEPORT RESERVOIR
ROUGH CREEK
T5N
ATASTRA CREEK
BODIE BOWL ACEC/SRMA
BRIDGEPORT
BRIDGEPORT VALLEY MANAGEMENT AREA
T4N
GREEN CREEK
167
R22E
DOG CREEK
T3N
NEVADA
CALIFORNIA
CONWAY SUMMIT SCENIC ACEC
R23E
VIRGINIA CREEK
SIERRA
R24E
MONO LAKE
T2N
GRANITE MOUNTAIN MANAGEMENT AREA
LEE VINING
T1N
6
MONO BASIN
SCENIC AREA
LEGEND
▩ Wild & Scenic River: Eligible
■ Campground
▦ Area of Critical Environmental Concern
▧ Special Recreation Management Area
□ BLM Lands
— Management Area Boundary
-·- Resource Area Boundary
------ Mono Basin Scenic Area



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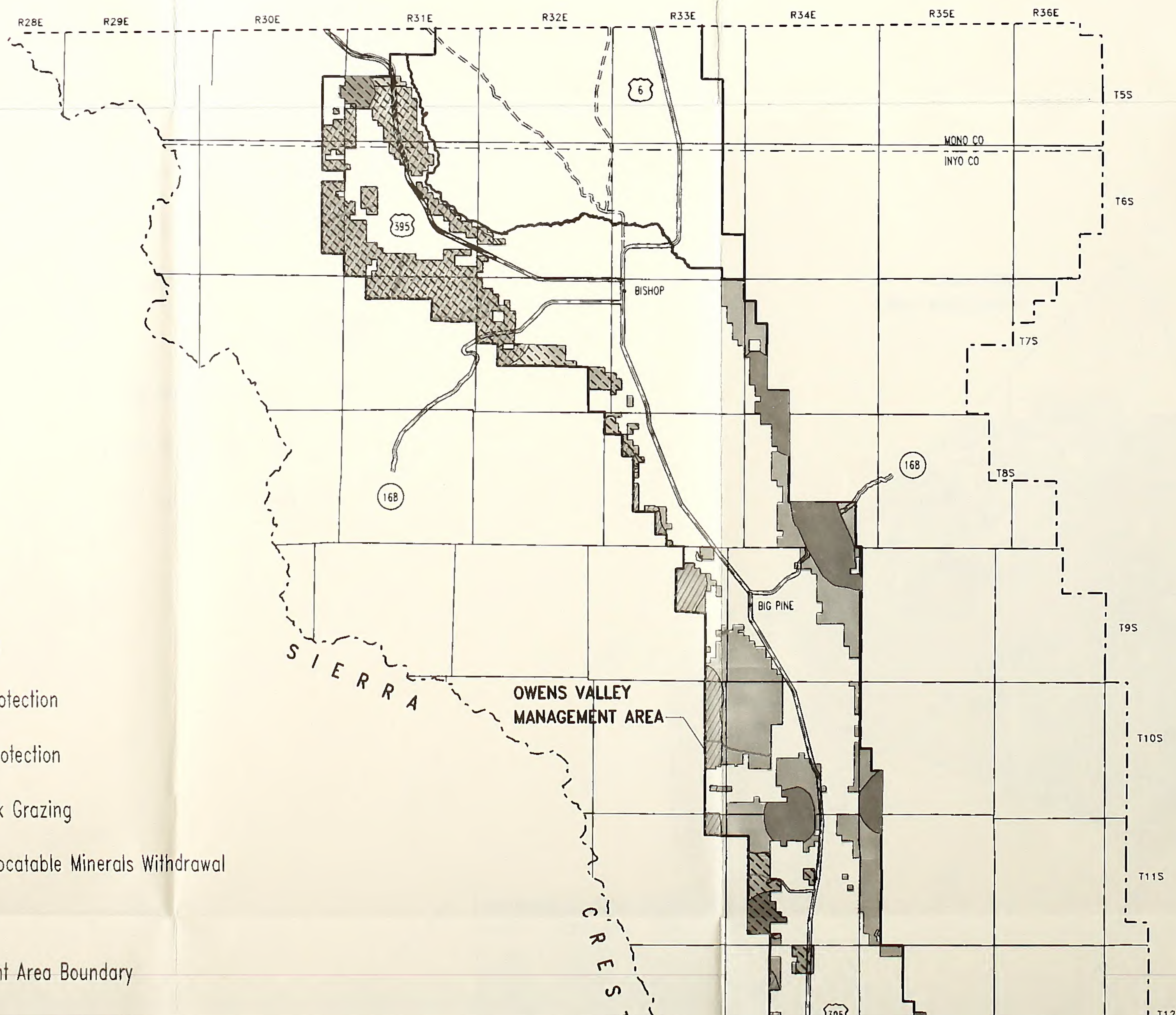
(NORTH HALF)

MAP 3
LAND USE RESTRICTIONS

BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

LAND USE RESTRICTIONS



LEGEND

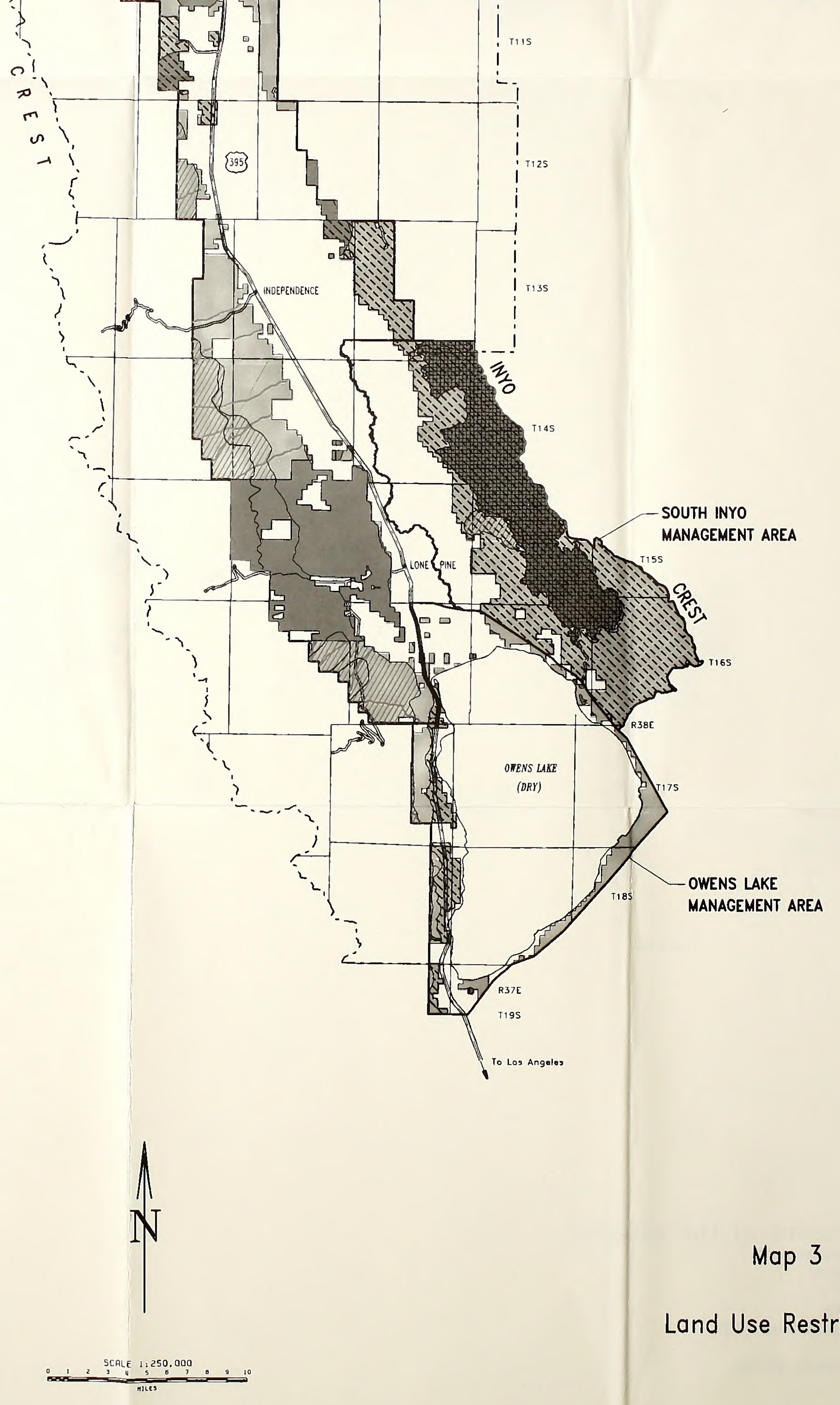
- ■ Yearlong Protection
- ▨ Seasonal Protection
- ▨ No Livestock Grazing
- ▦ Proposed Locatable Minerals Withdrawal
- □ BLM Lands
- — Management Area Boundary

▦ Proposed Locatable Minerals Withdrawal

☐ BLM Lands

— Management Area Boundary

-·- Resource Area Boundary



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Map 3

Land Use Restrictions

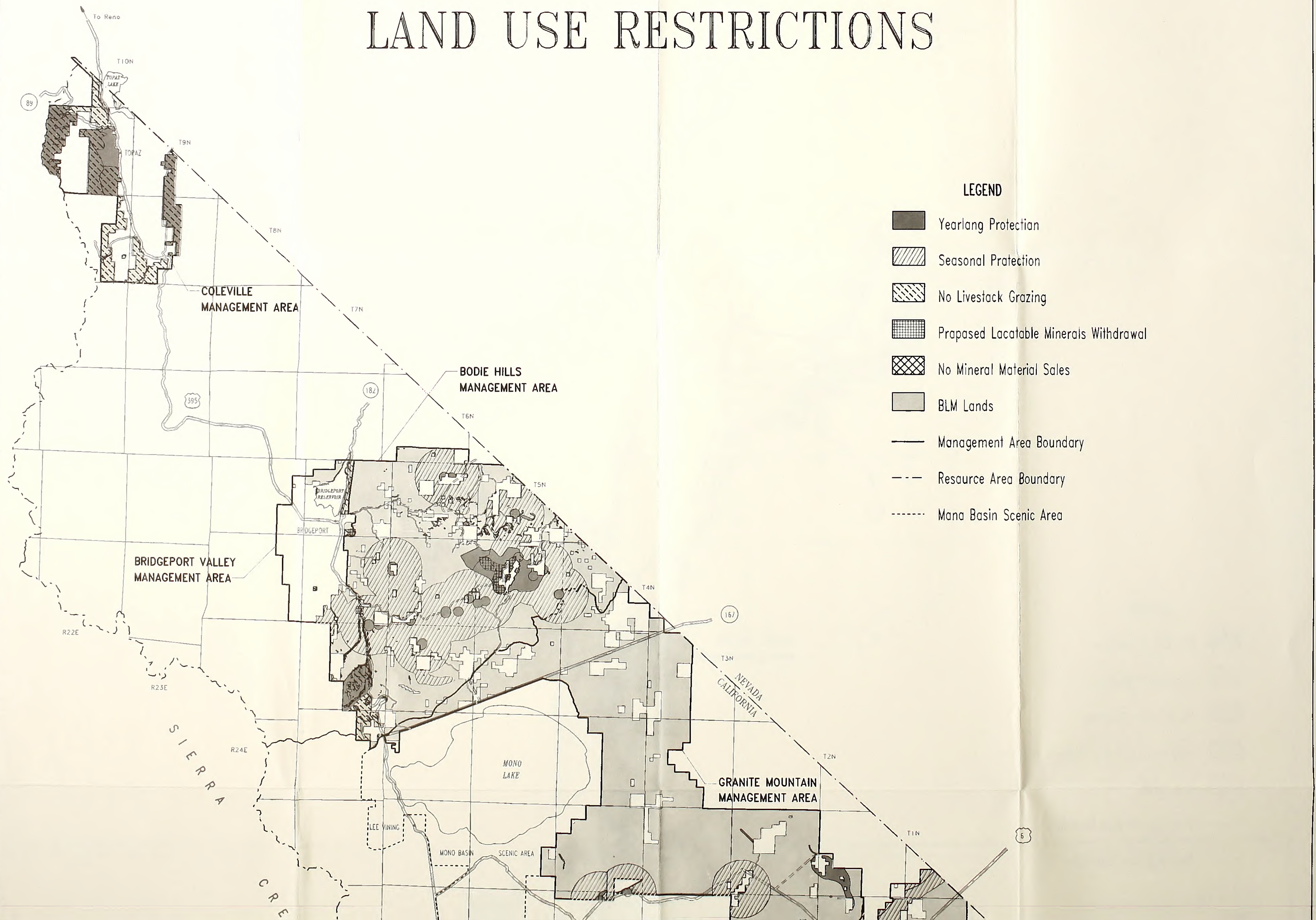
(SOUTH HALF)

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

March 3, 1849

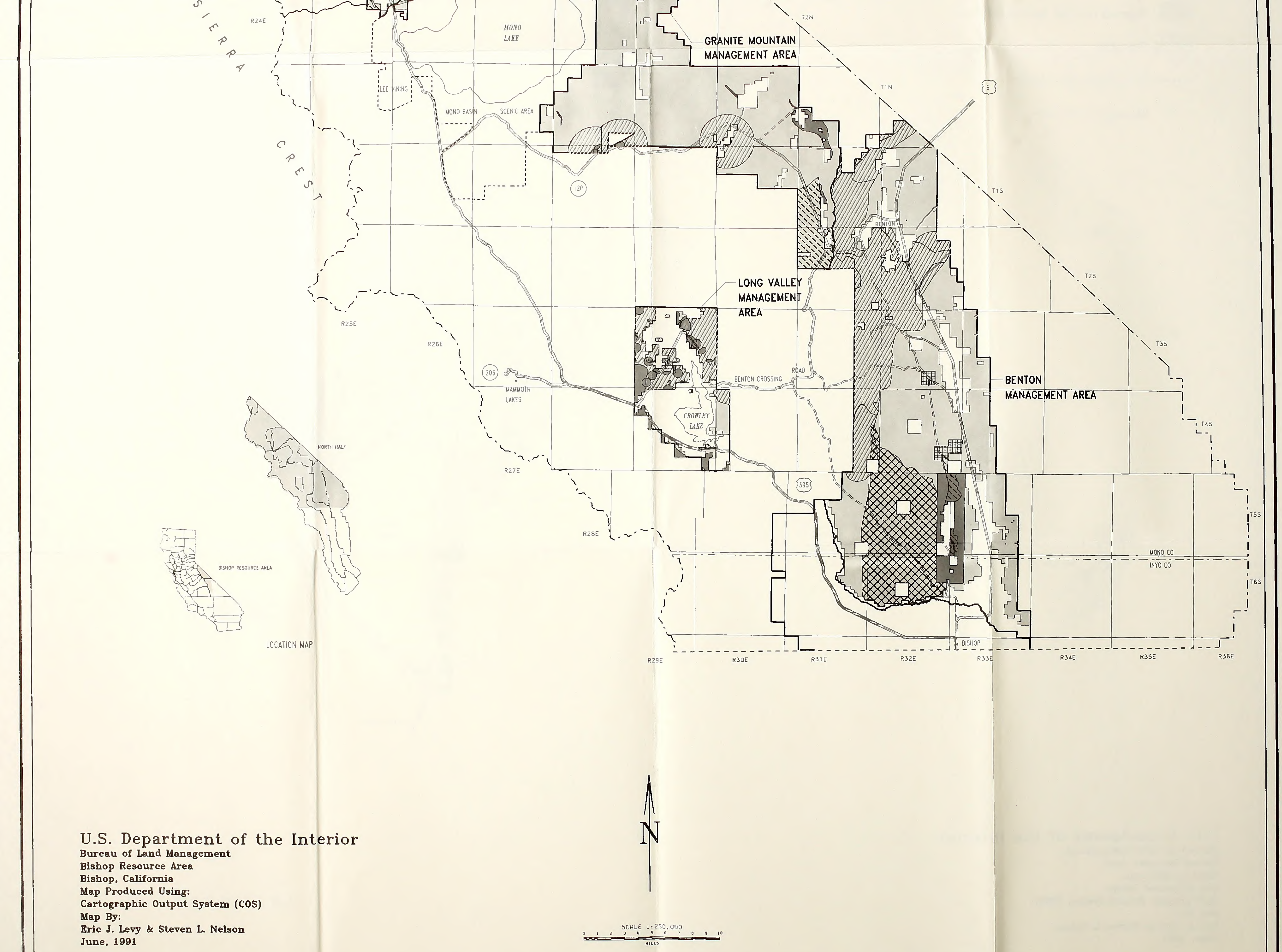
BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

LAND USE RESTRICTIONS



LEGEND

- ■ Yearlong Protection
- ▨ Seasonal Protection
- ▧ No Livestock Grazing
- ▦ Proposed Locatable Minerals Withdrawal
- ▩ No Mineral Material Sales
- ▢ BLM Lands
- ——— Management Area Boundary
- — · — Resource Area Boundary
- - - - - - Mono Basin Scenic Area



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MAP 4
LANDS AND MINERALS

U.S. DEPARTMENT OF THE INTERIOR
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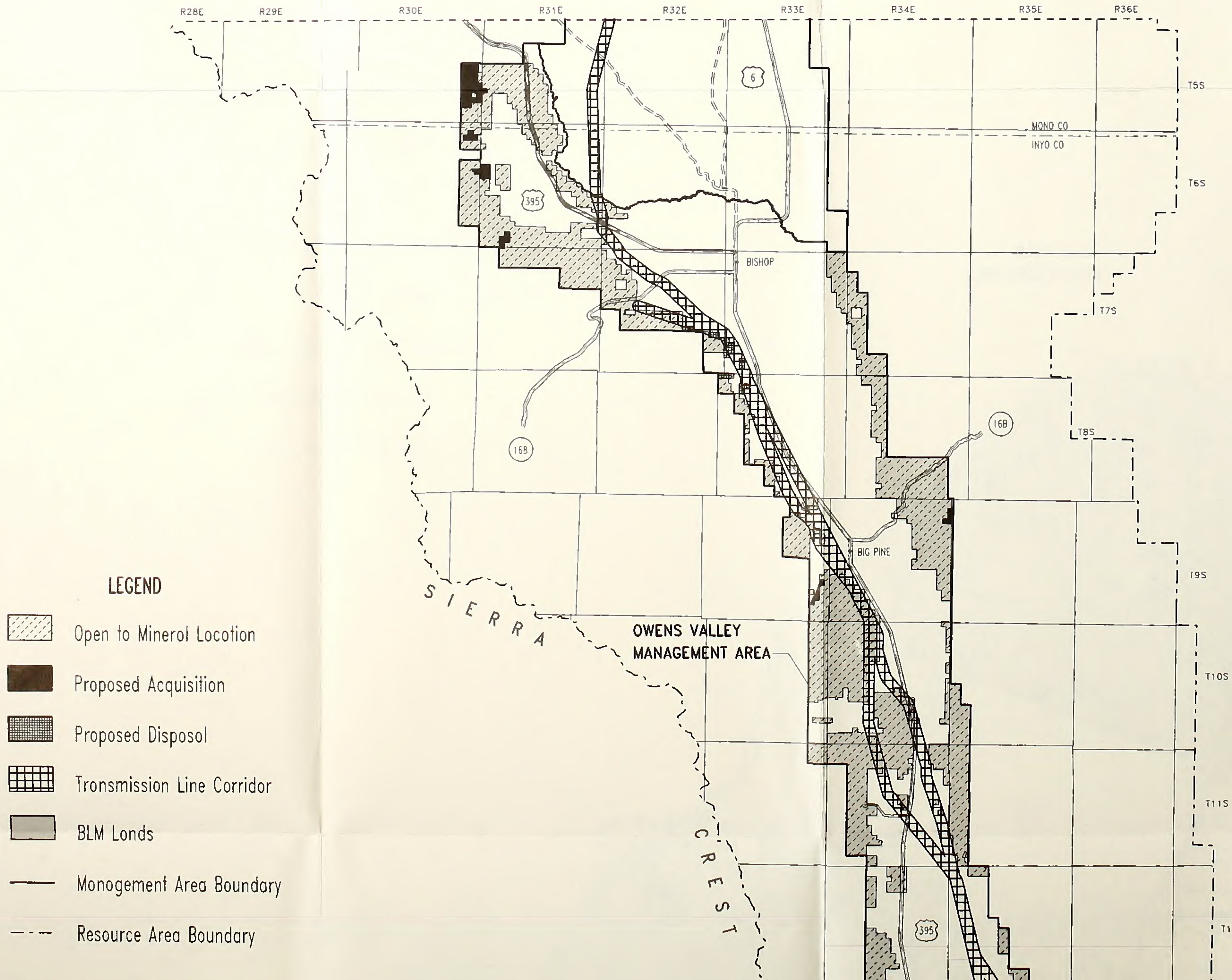
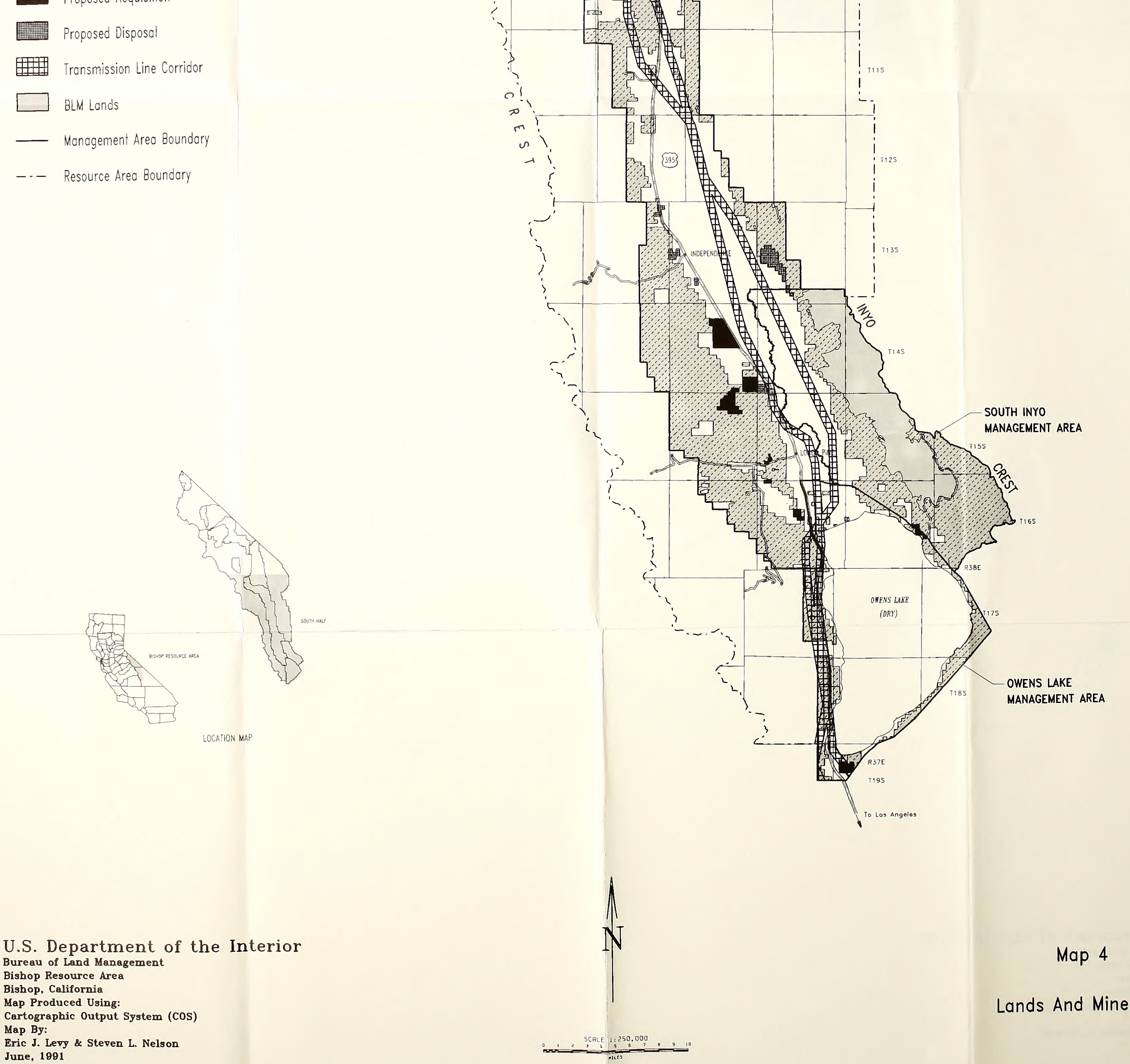
BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

LANDS AND MINERALS





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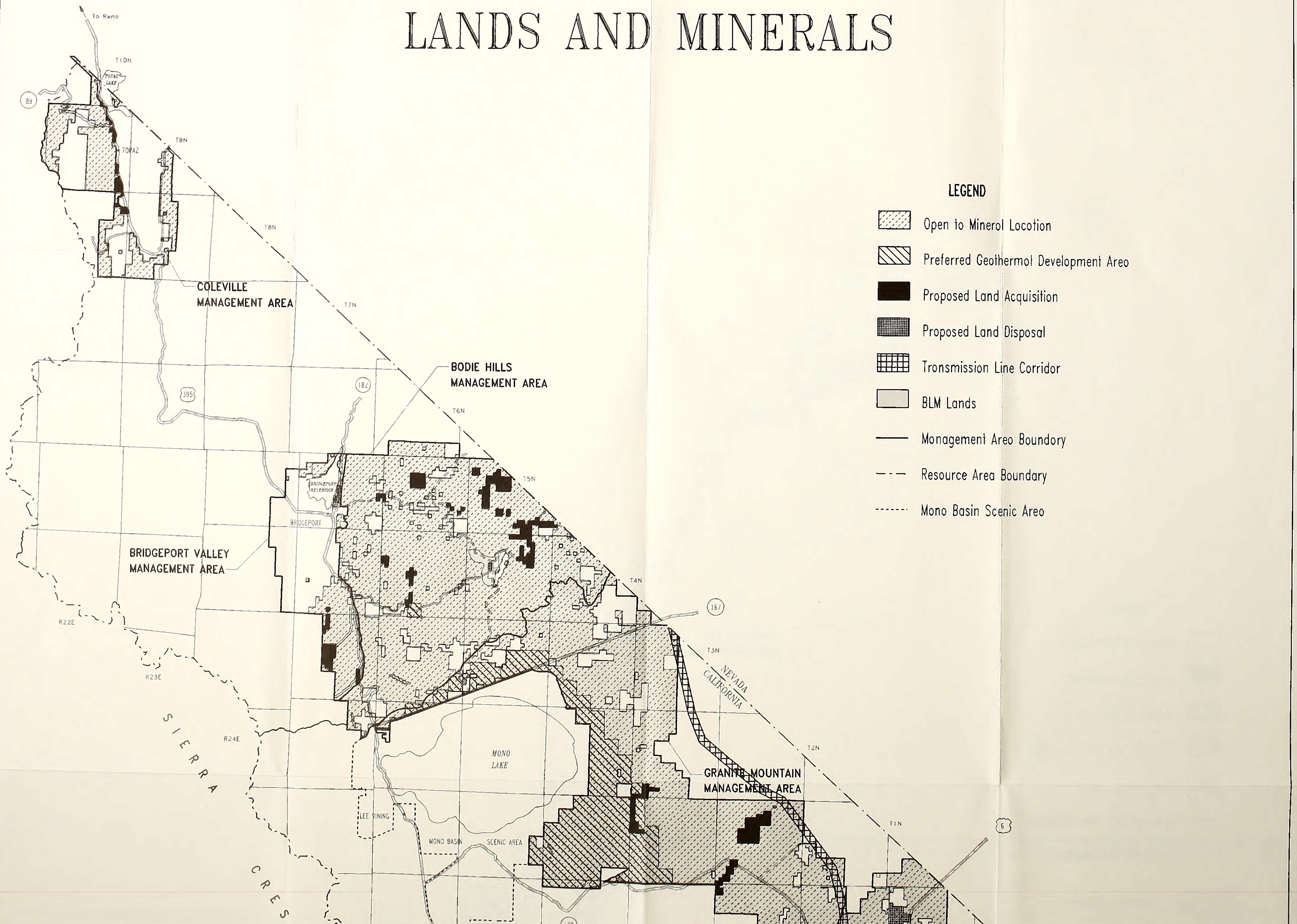
Map 4

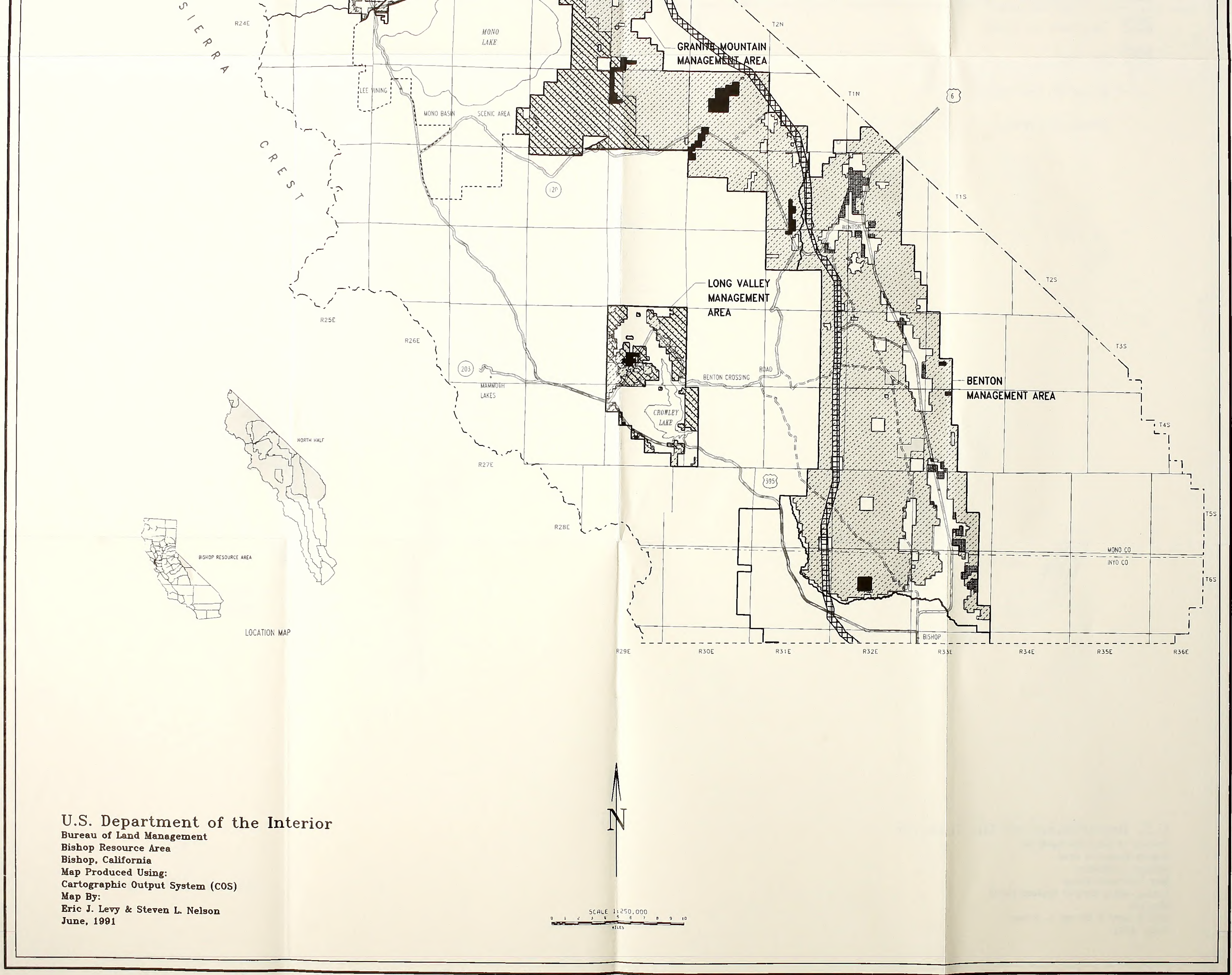
Lands And Minerals

(SOUTH HALF)

BISHOP RESOURCE AREA
RESOURCE MANAGEMENT PLAN

LANDS AND MINERALS





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